DOCUMENT RESUME

ED 459 129 SO 033 433

AUTHOR Abelmann, Charles; Johanson, Richard; Kohtbantau, Achariya; Moock, Peter; Poshyananda, Tanaporn; Trivisvavet, Supamas

TITLE Thailand--Secondary Education for Employment, Volume I: A Policy Note.
INSTITUTION World Bank, Washington, DC.
REPORT NO R-22660-TH
PUB DATE 2001-00-00
NOTE 57p.; This study is a collaborative effort of the World Bank and the Royal Thai Government. For Volume II, see SO 033 434.
AVAILABLE FROM World Bank InfoShop, 1818 H Street, NW, MSN J1-100, Washington, DC 20433 ($20). Tel: 202-458-5454; Fax: 202-522-1500; e-mail: pic@worldbank.org. For full text: http://www-wds.worldbank.org/.
PUB TYPE Reports - Evaluative (142)
EDRS PRICE EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Cultural Context; Developing Nations; Educational Assessment; *Educational Change; *Educational Policy; Educational Research; Foreign Countries; *Labor Force; *Secondary Education; *Skill Development
IDENTIFIERS Educational Issues; *Thailand

ABSTRACT

In Thailand, the need for skills in the labor force will become even greater in the next decade as the country's industrial and service companies seek to increase productivity through technological and organizational change. Historically, the limited provision of secondary education was a major bottleneck in skills development in Thailand. Major expansion in the 1990s, however, lifted enrollment rates to about 72% at the lower secondary level by the end of the decade, and 48% at the upper secondary level for both boys and girls. To assist policymakers and planners in their consideration of many complex decisions, including future international financial assistance, this study evaluated Thailand's system of secondary education and skills development. The study encompassed various background studies commissioned on key aspects of the system and followed a collaborative approach. This report is divided into the following chapters: (1) "Overview of the Thai Context" (Macroeconomic Environment, Trends in Thailand's Human Capital Stock); (2) "Impetus for Change" (Global Market Forces and Implications for Skills Needed, Legislative Basis for Education Reform); (3) "Governance and Administration" (Role of the Central Administration; Role of Local Authorities and Training Institutions in a Devolved System, Role of Private Providers); (4) "Using Market Forces to Guide Decisions"; (5) "Promoting Quality of Educational Outcomes" (Establishing Content and Performance Standards for Students, Measuring Student and School Performance, Harnessing Technology, Supporting Teacher and Principal Capacity); and (6) "Finance and Equity Issues." Contains 19 figures and a 39-item bibliography. (BT)

Reproductions supplied by EDRS are the best that can be made
from the original document.

Report No. 22660-TH

THAILAND

SECONDARY EDUCATION FOR EMPLOYMENT

Volume I: A Policy Note

East Asia and Pacific Region
The World Bank

ED 459 129

SO 033 433

J. Feather

2A

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
✓ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

Acknowledgments

This study is a collaborative effort of the World Bank and the Royal Thai Government. **The authors*** wish to acknowledge and thank Tracee Williams in the Human Development Unit of the World Bank's East Asia and Pacific Region (EASHD) and Kanchalika Klad-Ankul of the World Bank Office, Bangkok (WBOB) for their coordination and processing of the final document, and also Tasanee Chokwatana, who assisted with logistics and gave support from WBOB. Jacob Bregman, Zafiris Tzannatos, and Adrian Ziderman provided peer reviewer comments on the concept paper for the larger study of secondary education in Thailand, of which this report is a part. John Middleton was World Bank task manager of the study, and many individuals and agencies made important contributions of various kinds. Alan Ruby (Sector Director, EASHD) and Jayasankar Shivakumar (Country Director, WBOB) contributed the benefit of their sectoral and country experience, as well as management oversight. Clementina Acedo, Luis Benveniste, Peter Fleming and Josh Hawley contributed ideas to inform this report.

Also, the authors give special, personal thanks to Chana Kasipar (Council Member of Asian University of Science and Technology and Chairman of the Sub-Committee of Vocational Education and Training Reform), Nipon Poapongsakorn and TDRI research team, Lee Kian Chang and CSN & Associates, and Werawat Wanasiri (former president, the Federation of Private Vocational School of Thailand) for their collaboration on research carried out as background pieces for the study.

Finally, this study would not have been possible without the commitment and support from the Office of National Education Commission, under the leadership of Rung Kaewdang (Secretary General) and continued support from Chinnapat Bhumirat (Director, Bureau of Educational Policy Development and Strategic Planning), the Ministry of Education with kind assistance of Panom Pongpaiboon (Permanent Secretary). The Department of General Education, Department of Vocational Education, and Department of Non Formal Education have contributed by providing useful information and data over the year of this sector study. Moreover, the authors also thank UNESCO, GTZ, Thai-French Innovation Centre, and British Council for the valuable international perspectives that they have contributed to this study.

---

* **Charles Abelmann** is an education specialist in the Human Development Unit of the World Bank's East Asia and Pacific Region (EASHD). **Richard Johanson** is an education specialist and a consultant of the World Bank. **Achariya Kohtbantau** is a research assistant in the World Bank Office, Bangkok (WBOB). **Peter Moock** is a principal economist in EASHD. **Tanaporn Poshyananda** is a senior operations officer in WBOB. **Supamas Trivisvavet** is a research assistant in WBOB.

Table of Contents

INTRODUCTION AND EXECUTIVE SUMMARY III

1. OVERVIEW OF THE THAI CONTEXT 7

A. MACROECONOMIC ENVIRONMENT 7
Economic Growth Has Not Benefited All Thais Equally 9
Structure and Trends in the Labor Market 9
Labor Productivity and Education Attainment 12
B. TRENDS IN THAILAND'S HUMAN CAPITAL STOCK 14
Linkage between Human Capital and Economic Growth 15
Historical Rates of Return to Education and Training 16
Productivity and Technologies for Sustainable Growth 17

2. IMPETUS FOR CHANGE 18

A. GLOBAL MARKET FORCES AND IMPLICATIONS FOR SKILLS NEEDED 18
World-Wide Trends 18
Private Sector Views From Thailand 19
B. LEGISLATIVE BASIS FOR EDUCATION REFORM 21
Principal Features 22
Implications 23

3. GOVERNANCE AND ADMINISTRATION 25

A. ROLE OF THE CENTRAL ADMINISTRATION 25
B. ROLE OF LOCAL AUTHORITIES AND TRAINING INSTITUTIONS IN A DEVOLVED SYSTEM 27
C. ROLE OF PRIVATE PROVIDERS 28

4. USING MARKET FORCES TO GUIDE DECISIONS 31

5. PROMOTING QUALITY OF EDUCATIONAL OUTCOMES 37

A. ESTABLISHING CONTENT AND PERFORMANCE STANDARDS FOR STUDENTS 37
B. MEASURING STUDENT AND SCHOOL PERFORMANCE 41
C. HARNESSING TECHNOLOGY 42
D. SUPPORTING TEACHER AND PRINCIPAL CAPACITY 44

6. FINANCE AND EQUITY ISSUES 45

BIBLIOGRAPHY 52

TABLE OF FIGURES

FIGURE 1.1: REAL GDP GROWTH 1988 - 2000 7
FIGURE 1.2: POVERTY RATE 1988 - 1998 8
FIGURE 1.3: IMPACT OF ECONOMIC CRISIS ON REAL INCOME PER EARNER BY EDUCATION ATTAINMENT 8
FIGURE 1.4: POPULATION IN AGRICULTURE SECTOR 10
FIGURE 1.5: NUMBER OF EMPLOYED PERSONS BY SECTORS 11
FIGURE 1.6: YEAR-TO-YEAR CHANGES OF EMPLOYED PERSONS BY SECTORS 11
FIGURE 1.7: PERCENTAGES OF THAI POPULATION BY EDUCATION ATTAINMENT IN 1999 12

FIGURE 1.8: PERCENTAGES OF POPULATION (25-64 YEARS) COMPLETING SECONDARY EDUCATION IN SELECTED COUNTRIES, 1996 13
FIGURE 1.9: PERCENTAGES OF POPULATION (25-64 YEARS) WITH TERTIARY EDUCATION IN SELECTED COUNTRIES 15
FIGURE 1.10: R&D WORKERS PER 1,000 PEOPLE IN SELECTED COUNTRIES, 1999 15
FIGURE 2.1: SKILLS VIEWED AS IMPORTANT BY FIRMS HIRING ENTRY-LEVEL WORKERS 20
FIGURE 2.2: OTHER FACTORS VIEWED AS IMPORTANT BY FIRMS HIRING ENTRY-LEVEL WORKERS 20
FIGURE 3.1: PRIVATE AS A % OF TOTAL ENROLLMENT BY LEVEL AND TYPE OF SCHOOL, 1998 28
FIGURE 3.2: PRIVATE VOCATIONAL ENROLLMENT AS A % OF TOTAL ENROLLMENTS BY LEVEL 28
FIGURE 4.1: DESTINATION OF GRADUATES FROM PRIVATE VOCATIONAL SCHOOLS 33
FIGURE 6.1: ENROLLMENT PROJECTIONS FOR SCENARIOS 1 AND 2, 1999-2010 46
FIGURE 6.2: RECURRENT COST TO GOVERNMENT OF SCENARIOS 1 AND 2, 1999-2010 47
FIGURE 6.3: COMPARATIVE RECURRENT COSTS OF ALL SIX SCENARIOS IN 2010 48
FIGURE 6.4: GROSS ENROLLMENT RATIOS BY REGION, 1997 50

INTRODUCTION AND EXECUTIVE SUMMARY

The need for skills in the labor force will become even greater in the next decade as Thailand's industrial and service companies seek to increase productivity through technological and organizational change. Finding ways to improve the skills of youth and adults of the Kingdom is a high priority, for promoting economic growth, reducing poverty and improving quality of life.

Secondary education is the linchpin for skills development. It is at the secondary level that students, parents, educators and policymakers make choices that determine future occupations and earnings. Historically, the limited provision of secondary education was a major bottleneck in skills development in Thailand. Enrollment rates lagged considerably behind those in other countries in the region in the 1970s and 1980s. Major expansion in the 1990s, however, lifted enrollment rates to about 72 percent at the lower secondary level by the end of the decade, and 48 percent at the upper secondary level, for both boys and girls. About 40 percent of these students were enrolled in vocational secondary schools. If we also count those enrolled in non-formal programs, the proportions enrolled at the lower and upper secondary levels rise to about 90 percent and 50 percent.

Thailand faces a number of critical policy decisions in secondary education. These include: devising a strategy for expanding places in upper secondary education; defining the roles that government and the private sector will play in this expansion; developing a realistic formula for cost sharing between government and the private sector, and for the public financing of education; finding an appropriate balance between the academic and vocational tracks in secondary education. Another challenge will be to ensure that all students, regardless of type of school, have a strong foundation in general skills that will equip them to be effective life-long learners.

Policy decisions on these major questions for the education sector have to take place in the context of major structural and administrative reforms under newly enacted legislation. The Constitution of 1996 and the National Education Act of 1999 call for sweeping changes in the way education is organized, administered and financed. Compulsory education will be raised from six to nine years of schooling with 12 years of education freely available to those who want it. The fragmented administrative structure at the center will be consolidated and major functions and finance decentralized to local education areas that will have freedom to manage the delivery of educational services. The National Education Act calls for the development of separate legislation on vocational education and training. An Office of Education Reform has been established specifically to address issues of implementation of the reform having to do with teaching personnel, administration and management, and resource mobilization.

This study is rooted in a request from Government in early 1999 asking the World Bank to assist in undertaking an evaluation of the system of secondary education and skills development. The purpose was to assist policymakers and planners in their consideration of many complex

decisions, including possible future international financial assistance. The objectives of the study were to: (a) determine general trends in sectoral employment, including a sampling of employer views on skill requirements; (b) evaluate the cost effectiveness and quality of present academic and vocational secondary education; and (c) develop alternative scenarios for expansion of secondary education. A steering committee to guide and oversee the study was established with the Ministry of Education (MOE) and the Office of the National Education Commission (ONEC) sharing in the leadership.

The overall study encompassed various background studies commissioned on key aspects of the system. These studies were prepared from an array of sources: various Government agencies, local and external consultants, other donor agencies and Bank staff. The complete list appears in the bibliography, but notably includes a survey of employers' requirements, employer training, evaluation of private vocational education and an analysis of the costs of the reforms under different scenarios.

The study followed a collaborative approach from the start. ONEC and MOE were the principal counterpart agencies for the study. They undertook several background studies and organized dissemination activities. Key government education and training agencies and associations provided reports on their own programs, the issues they confront and suggestions for future development. In addition, other bilateral and international agencies also contributed written work and participated in providing intellectual support for the study, including Australia, France, Germany, the U. K., Unesco and ILO. Conclusions were drawn and dissemination began with broad-ranging discussions on the results of the study at a four-day seminar in Thailand in April, 2000, organized by ONEC.

The extensive collaboration was instrumental in eliciting views from a wide audience on the principal findings of the study. However, the views expressed in this synthesis report are solely those of the authors and do not necessarily reflect Bank policy. The authors accept responsibility for any errors of omission or fact.

The range of background work for the overall study was broad. However, at the time of the April seminar ONEC requested that the Bank's final synthesis be a short document focused on advice for the new law on vocational education. The essence of the following report, therefore, centers on a set of principles to guide the new legislation on vocational education.

The report consists of six chapters. Chapter 1 provides an *overview of the changing Thai economy* and documents the growing importance of education and skills for global competitiveness. While Thais, in general, benefited from the decade of double-digit growth prior to the onset of the financial crisis in 1997, some Thais benefited much more than others. Continued growth and eliminating poverty that remains (13 percent of the population fell below the poverty line in 1998) will require expanding educational opportunities for the disadvantaged and ensuring that the education provided is of reasonable quality. Moreover, Chapter 1 provides an overview of labor market trends and the development of its human capital stock, which demonstrates the under-education of Thailand's labor force, relative to many of the countries with which Thailand competes in the global economy. This situation reinforces the urgent need for high-quality education and training and demand-driven skills development.

Chapter 2 presents the *factors motivating change* in Thailand's system of education and training. The chapter examines the market forces driving the need for reform of the system and argues that the needs of the private sector in Thailand are now much the same as those in the most developed countries. The chapter also summarizes the implications of the Constitution of 1997 and the National Education Act of 1999 for secondary education reform, and discusses the imminent enactment of another constitutional act re-defining the nature, objectives and delivery mechanisms for vocational education in the country.

Chapter 3 discusses important principles related to the *governance and administration* of the system, and their implications for government action. The chapter advocates that the role of the central government should focus on setting policies and standards, monitoring achievements and ensuring that needed inputs are appropriately financed and equitably distributed. A key message is that central government should liberalize its regulation of the provision of inputs and move to a system that monitors outputs according to agreed specifications and criteria. Local institutions need to be given the autonomy to decide on the use of resources and delivery of services and be held accountable to higher authorities for results achieved. The state should promote a diversity of providers of educational services and assure a "level playing field" between the public and private sectors.

Chapter 4 argues that certain principles, including *attention to market forces*, should guide the decisions of policymakers. Decisions about the content of the curriculum must reflect national goals but should be, otherwise, market-driven. This requires close collaboration between government and the private sector. Reform should take into account employer-defined competencies, ensure that these are clearly understood and incorporated into the curriculum, and then monitor achievement. Diplomas, certificates and degrees should reflect the mastery of skills and knowledge rather than time spent in school. While there is debate over the appropriate balance between general and vocational education, and between the public and private provision of educational services, the "right" mix in each case should be market-driven and not decided a priori. The market, in most countries, including Thailand, suggests that students should avoid early and narrow specialization. The education system needs to promote an open and flexible system for life-long learning.

Chapter 5 stresses the importance of the *quality of education outcomes*. Promoting quality will require: (1) setting clear and consistent content and performance standards for what students should know and be able to do, (2) assessing, reporting and rewarding student, teacher and school performance, (3) harnessing technology to support both student and educator development, and (4) supporting teachers and school administrators throughout their careers to support student learning. Content and performance standards should be set through a process of broad consultation, and should apply to all students regardless of what type of secondary school they attend or which ministry or department is responsible for the school's administration. Standards should guide both pre-service and in-service teacher development to assure that all teachers meet minimum standards. This will require a substantial investment in the latter (i.e., in-service training) – the "life-long learning" of teachers.

Chapter 6 examines the *cost implications of the reform program* and raises questions about how the program will be financed and what might be its impact on equity. Six cost scenarios,

developed by researchers in Thailand in collaboration with World Bank staff, are presented and discussed. A conclusion of this analysis is that achieving universal secondary enrollments in Thailand, i.e., the expansion *per se* in the number of students is affordable in recurrent-expenditure terms if the expansion provides an opportunity for enhancing the efficiency of secondary education delivery by increasing student-teacher ratios. Thailand's reform program focuses, however, not on expansion alone but also on the enhancement of quality and market relevance. Two strategies considered for achieving better educational outcomes would be to pay teachers more (to attract better "talent" into the profession, and to reward higher academic credentials and additional training) and to increase the curricular emphasis on information technology (which will require expenditure on hardware, software and specialized teacher training). The chapter warns against careless implementation of the first strategy, which would be to increase the salaries of all teachers proportionately, regardless of factors related to performance, demand and scarcity. Instead, Government should encourage a multiple pay structure for teachers, something that should be easier to accomplish as decentralization occurs.

Chapter 6 also considers different strategies for *financing* the high costs of the reform program. One will be to eliminate inefficiencies that now exist in the provision of educational services. An increase in cooperation, networking and sharing of resources among government ministries, among ministry departments, among teaching institutions and between government and the private sector is one way to do this. Another strategy to reduce the burden of the program on the national budget is to encourage the continued diversity of providers, something that has characterized Thailand's education system in the past, and to allow the private sectors, including families who wish to send their children to private schools, to share in the financing of education's costs. A key role of the central government is to provide financing to ensure access for those who cannot afford self-financing. Equality of educational opportunity will require targeting of resources to the most disadvantaged.

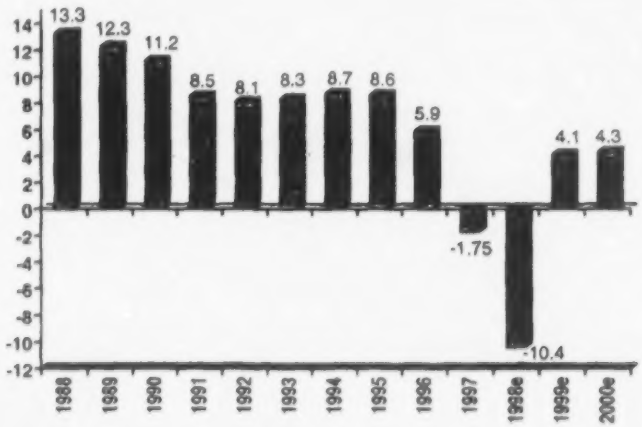
Reform of secondary and vocational education will require government to respond and anticipate the needs of a new knowledge-based economy. The old distinction between "general skills" and "specific skills" is no longer so simple. Today's general skills still include such things as reading and writing and mathematics, but also a broader set of competencies that all youth should be expected to learn. The "new general skills" include the ability to work in a team, to approach new problems creatively, to know how to use a computer and, increasingly for countries in the region, at least to understand English, if not to speak it fluently. Upper secondary level students, regardless of the type of school they attend, need to master these general skills. Defining skills narrowly for a particular industry and building a secondary education program around these specific skills is a risky endeavor. Students who have strong general skills will be quick learners across a wide range of work settings. Employers can provide the training in specific skills needed by particular workers for particular jobs. There will continue to be a need for high-quality technical programs focused on specific industries, but most such programs should be offered through tertiary institutions. These tertiary institutions will need to work in partnership with the private sector to support the development of the future workforce.

1. OVERVIEW OF THE THAI CONTEXT

A. MACROECONOMIC ENVIRONMENT

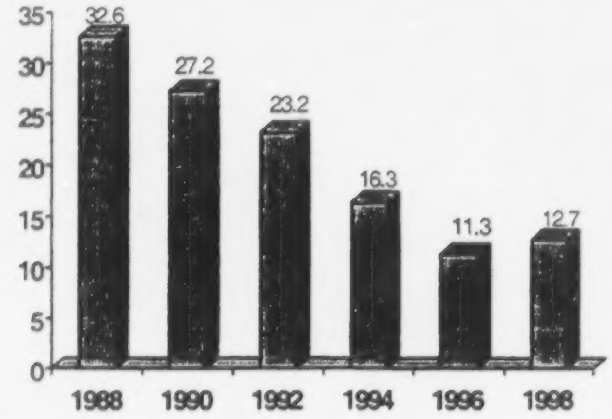
Thailand's economy experienced several years of double-digit growth during the late 1980s and early 1990s. This rapid export-led economic growth continued through the mid-1990s, with gross domestic product rising about 8 percent per year until the middle of 1997 when the financial crisis emerged and a sharp downturn occurred. The 1997 crisis marked a drastic change in Thai society and in the economy. GDP growth fell sharply, reaching an annual low of negative 10.4 percent in 1998, 18 percentage points below the 10-year average prior to 1998 (Figure 1.1). International reserves were exhausted, the local currency was devalued by about 40 percent, the balance of payments deteriorated, and foreign investment fled the country. The financial and real estate sectors, as well as many large and small businesses, also collapsed. Consequently, the average Thai saw earnings fall and many experienced loss of work as employment declined sharply.

Figure 1.1: Real GDP Growth 1988 - 2000
(Percent)



Source: National Economic and Social Development Board.
Note: e = estimated

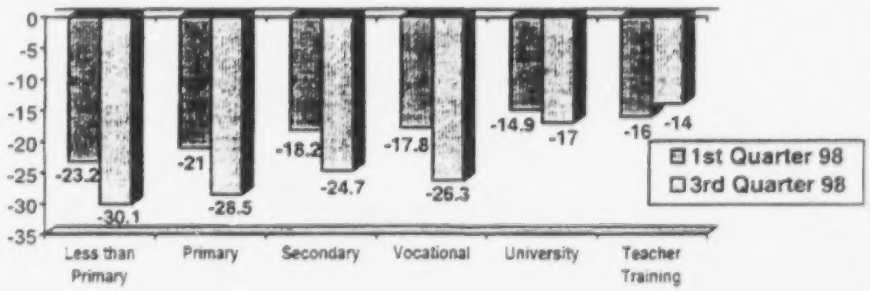
Figure 1.2: Poverty Rate 1988 - 1998
(Percent)



Source: National Economic and Social Development Board.

The decade of rapid economic growth had been accompanied by significant reduction in poverty. The national poverty rate (families with incomes below Thailand's official poverty line) fell from 33 percent in 1988 to 11 percent in 1996. In 1998, however, the first full year of the crisis, poverty crept up again, to nearly 13 percent of the population (Figure 1.2). An additional 1.1 million Thais fell beneath the poverty line. Real consumption *per capita* fell from US$ 183 in 1997 to US$ 170 in 1999 (Office of the National Education Commission 1999, and World Bank 1999). People with low educational attainment and low skills were hurt most (see Figure 1.3).

Figure 1.3: Impact of Economic Crisis on Real Income per Earner by Education Attainment
(Percent)



Source: Kakwani and Pothong, 1999.

Economic Growth Has Not Benefited All Thais Equally

Growth in Thailand prior to 1998 was not shared equitably by all citizens. The average income of the richest 20 percent of the population was more than ten times higher than that of the poorest 20 percent. The impact of the crisis has been to worsen inequality: The Gini Coefficient, an economist's measure of inequality, has increased slightly since 1988. Whereas incomes rose and the percentage of the population in poverty decreased continuously between 1988 and 1996, regional disparity between the Bangkok Metropolitan Region (BMR) and the rest of the country continued to widen. The Northeast Region, which has the nation's lowest education enrollments rates at all educational levels, is also the region with the lowest per capita income in the country.

The Government has launched several measures to lessen inequality, many of these directed specifically at disparities in education. Two such measures are:

Student Loan Scheme initiated in 1996. A revolving fund of about 3.6 billion Baht has been established to provide loans to students from lower secondary to university levels. The interest charged is 1 percent. Close to 150,000 students benefited from the loan scheme in 1996. The number of loan recipients increased to 881,835 in 1999, when the fund was increased to 23.7 billion Baht (Government of Thailand, Office of Student Loan Fund 2000).

Tuition Waiver Program initiated in 1999 by the Department of General Education (MOE). Tuition waivers are being granted for students in grades 7 and 10.

In addition, the new Education Act, promulgated in 1999, places a heavy emphasis on eliminating disparities within education. Included in the Act is the statement that "all individuals shall have equal rights and opportunities to receive basic education provided by the State for the duration of 12 years,"[1] and also the promise that "such education, provided on a nationwide basis, shall be of quality and free of charge" (Government of Thailand, *Education Act of 1999*, Chapter 2, Section 10, para. 2-4).

Structure and Trends in the Labor Market

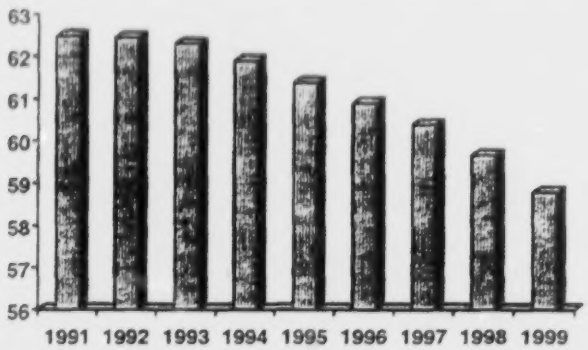
Until quite recently, Thailand could still be considered an agricultural country. Up to 80 percent of the labor force was engaged in agricultural activities in the 1960s and early 1970s. Over

---

[1] According to the Transitory Provisions of the Act, the Government has a maximum of five years following the promulgation of the Act to initiate other actions necessary to accomplish the provision of free basic education for all citizens. Based on the Act, by the year 2004, quality basic education should be available free of charge for all Thais. Achieving this mandate will be difficult, as it will require a substantial increase in public investment in education to ensure access while, at the same time, strengthen the quality of education. Currently some families are able to contribute financially to the education of their children, and such private investment should not necessarily be discouraged. In some cases, limited public resources might need to be targeted to achieve the goals of the new education act.

the past decade, however, the role of the agricultural sector has diminished rapidly, as the economy has become more industrialized and oriented towards international trade. Rapid economic growth from the mid-1980s to the mid-1990s resulted in major structural changes in the labor market. The share of the labor force engaged in agriculture declined by over 10 percentage points in just over a decade (Figure 1.4), with industrial and service employment taking up most of the slack.

Figure 1.4: Population in Agriculture Sector
(Percent)

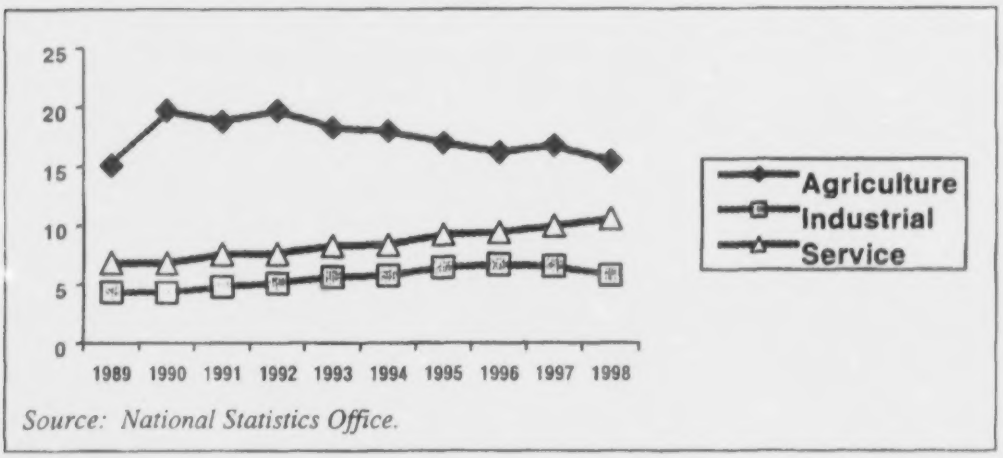


Source: Ministry of Agriculture and Cooperatives.

Consequently, the employment trend for the agriculture sector has shown a continuing decline, while the trends in both the industrial and service sectors has shown continuing increases. Since the onset of the crisis, however, only employment in the service sector has continued to increase (Figures 1.5 and 1.6).[2]

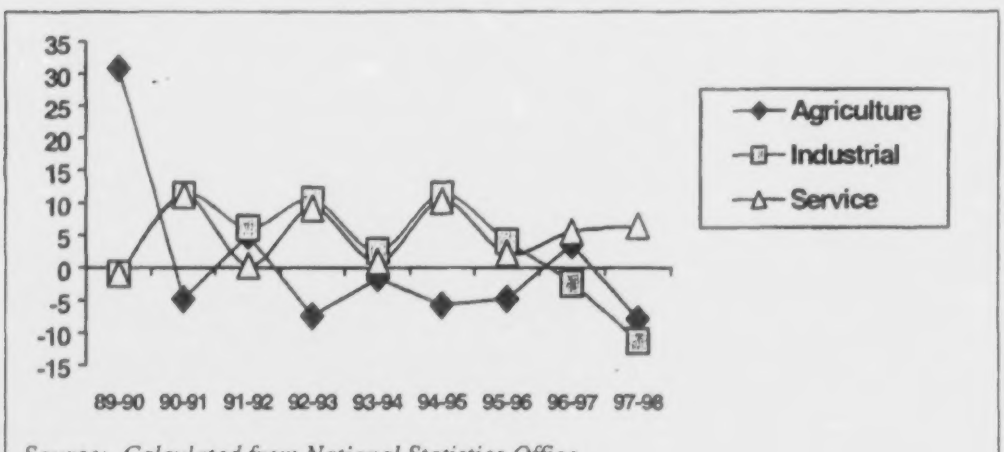
[2] Data from National Statistics Office's Labor Survey, round 3 (August). Three rounds of surveys were conducted in February (round 1), May (round 2) and August (round 3). The third round is used in these figures due to availability and consistency of data. August, however, is the harvest season in Thailand, which may mean that these graphs overestimate the size of the agricultural labor force population as compared with other times in the year. Definition of sectors in graphs: agriculture includes farming and related agro-industries and businesses; industrial includes mining, quarrying, manufacturing, construction, repair and demolition, electricity, gas, water, and sanitary services; service includes commerce, transport, storage, communication, services, and other activities not falling neatly elsewhere.

Figure 1.5: Number of Employed Persons by Sectors
(Percent)



Source: National Statistics Office.

Figure 1.6: Year-to-Year Changes of Employed Persons by Sectors
(Percent)



Source: Calculated from National Statistics Office.

Real wages have risen sharply in all regions of the country since the late1980s. The much lower wages in agriculture, less than half the wages in industrial sector and service sector (with service sector wage even higher than industrial wage), have reinforced the trend and increased the movement of labor out of agriculture (NESDB 2000). While agricultural incomes have grown at a slower rate, industrial and service sector incomes, particularly those for construction and automotive white-collar workers, have been subject to greater fluctuation and were severely hurt during the recent economic crisis (Middleton and Tzannatos 1998).

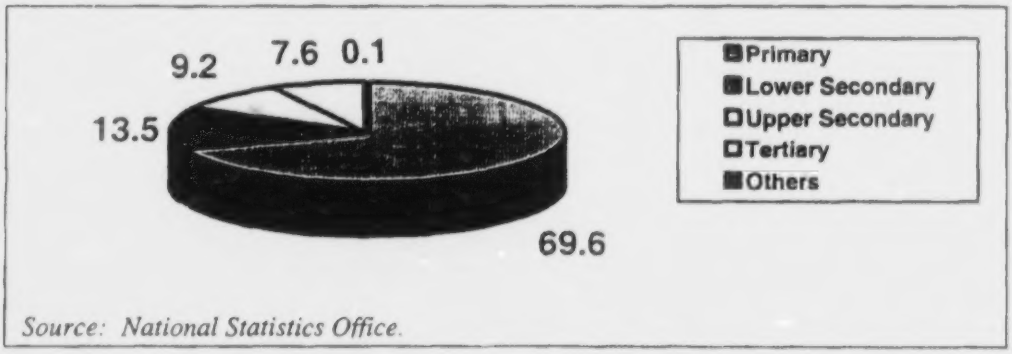
By comparison, agricultural incomes have been quite stable. And despite the worker outflow, this sector still accounts for roughly half of total employment in the nation. A study by the Thailand Development Research Institute estimating labor demand and prepared as a background paper for the Ninth National Economic and Social Development Plan (TDRI 1998) predicted that, in the period from 1997 to 2001, labor demand would be highest for the farm and mining sector (47.3 percent), followed by technicians (23.4 percent), professionals (8.4 percent), commercial workers (6.3 percent), service workers (6.2 percent), clerical workers (5.8 percent) and managerial and government workers (2.8 percent).

Labor Productivity and Education Attainment

The economic crisis has raised issues about the quality and productivity of Thai workers. The *World Competitiveness Yearbook 1999* (IMD 1999) shows that the average productivity of Thai laborers is only US$ 5.45 per hour (adjusted for Purchasing Power Parity), as compared with US$ 31.28 for American laborers, US$ 25.73 for Japanese, US$ 23.79 for Singaporean, US$ 9.71 for Malaysian and US$ 6.2 for Filipino. The data show that the educational attainment and productivity of Thai laborers lag behind those both in developed countries and in neighboring developing countries. While real wages have increased, productivity has not kept pace. The shortage of skilled laborers has been cited as the major obstacle to economic growth in Thailand (Middleton and Tzannatos 1998).

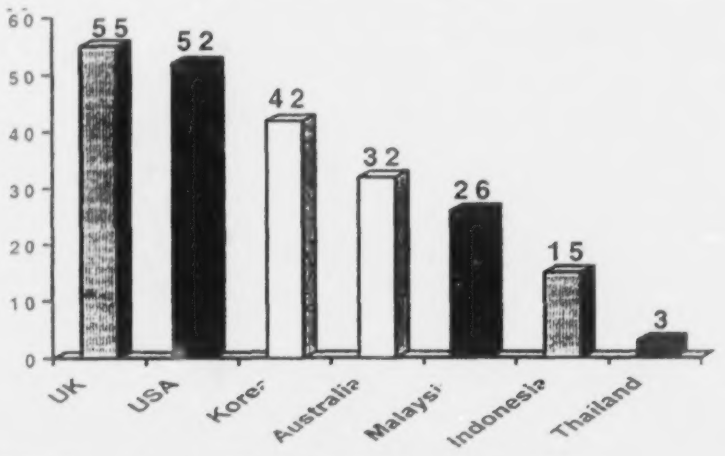
About 70 percent of the Thai population aged 13 years and above have only a primary or lower than primary education (Figure 1.7). Only 3 percent of those between the ages of 25 and 64 have completed secondary education, as compared with over 50 percent in the United States and England, 42 percent in the Republic of Korea, 26 percent in Malaysia and 15 percent in Indonesia (Figure 1.8). The very low proportion of labor with secondary education was caused by a very low secondary enrollment rate during the 1960s and 1970s, when the Government was trying to achieve universal primary education and improve its quality, at the cost of investing in secondary education. However, there have been rapid increases in the transition rate from primary to secondary during the last few years. Secondary enrollment, stagnant at the rate of around 35 to 40 percent in the early 1990s, has now nearly doubled to 75 percent in 1998 (ONEC 1999). Therefore, it can be expected that the percentage of workers who have completed secondary education will increase sharply in the next few years, and this should increase the productivity of the labor force.

Figure 1.7: Percentages of Thai Population by Education Attainment in 1999



Source: National Statistics Office.

Figure 1.8: Percentages of Population (25-64 years) Completing Secondary Education in Selected Countries, 1996



Source: OECD Education at a Glance, OECD Indicators, 1998.

The low educational attainment of the majority of Thai workers makes it hard for them to acquire the high-tech skills needed to compete in the global economy. More developed countries are producing more technology-intensive products. Many of Thailand's neighbors still enjoy the advantages of low-cost labor, whereas Thailand is loosing its comparative advantage in labor-intensive industries to lower-income countries such as Laos, Vietnam, and China. The Thai labor force, with relatively higher wages and lower educational attainment, lacks the skills necessary for the country to be competitive in technology-based industries in the global economy. Recent activity in both the public and private sectors may help to address the constraints to Thailand's competitiveness. The Government has provided training to laborers through the Department of Skill Development in the Ministry of Labor and Social Welfare. The Skill Development Funds and relevant Skill Development and Training Promotion Acts are encouraging businesses to provide more training to employees. Recent research by the World Bank and CSN has found that most Thai companies, particularly medium-sized and large companies, provide training, both formal and informal, for their employees.[3] A 1996 study shows that over 70% of firms provide training to works.[4] This can, in part, be explained by a shortage of secondary graduates.

---

[3] Zuefack, Albert G., Charles Abelmann (World Bank), Lee Kian Chang, Pinchuda Tinakorn Na Ayuthaya (CSN and Associate). 2000. *Changing Workplaces, Changing Skills: Views from the Thai Private Sector on Work-Organization, Employee Retirement and Selection.* World Bank Research Paper. Washington, D. C.

[4] Zeufack, Albert G. 1999. "Employer-Provided Training Under Oligopolistic Labor Market: Evidence from Thai Manufacturing Firms." Mimeo, DECRG, The World Bank, Washington, D. C.

B. Trends in Thailand's Human Capital Stock

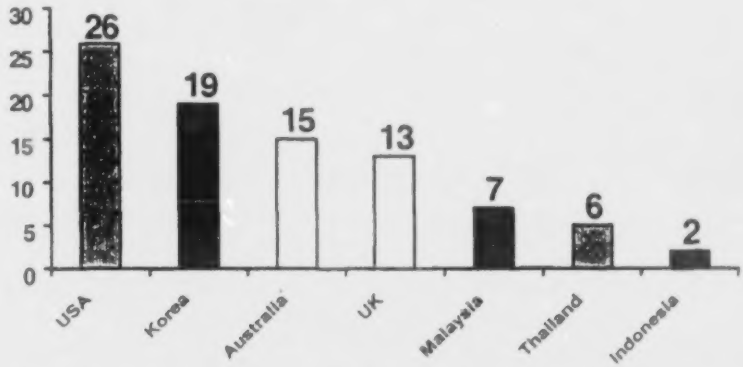
Improving the quality of human capital is the most promising strategy for sustainable economic growth in Thailand. The Government has shown its commitment to the strategy of human capital development by improving the quality of education and providing educational access to more of the nation's school-age children. Over the past decade, a substantial budget share has been allocated to the education sector. In recent years, spending on education has nearly equaled 20 percent of the total government budget and about 4 percent of GDP, comparable to the allocations in many high-income countries, including the Republic of Korea, Japan and the United States. Despite the economic crisis, which has necessitated budget tightening since 1997, education's share of the total budget has continued to be higher than the share of any other sector. The National Education Act of 1999 demonstrates the Government's commitment to education by promising 12 years of quality education for all Thais, free of charge, by 2004.

The effectiveness of budget utilization is low, however, with too much of what is spent allocated to administration and salaries, and too little to other, quality enhancing inputs. Moreover, despite having achieved nearly universal enrollment in primary education and high adult literacy, Thailand has, until very recently, lagged behind other countries at comparable income levels in terms of secondary education development. As noted above (Figure 1.8), only three percent of Thailand's adult population between the ages of 25 and 64 have completed secondary education. This is one of the lowest levels in East Asia and far below the level of most developed countries.

As a result, even though a high proportion (92.8, 81.8 and 79.5 percent in 1997, 1998 and 1999, respectively; ONEC 1999) of those who complete secondary education continue their studies and attend tertiary education (university, college or advanced technical training), the proportion of the adult population with some tertiary education is, nevertheless, at 5 percent, quite low as compared with most middle- and high-income countries (Figure 1.9). Of the small number who go on to tertiary education, only a few choose concentrations in technology-related fields and the sciences. An implication of this is that the number of scientists and technical personnel is too low to allow the country to compete successfully today in the global economy Currently, there are only about two R&D scientists and technicians per 10,000 people in Thailand, as compared with 2.6, 2.9 and 7.1 per 1,000 people in Singapore, the Republic of Korea and Japan, respectively (Figure 1.10).

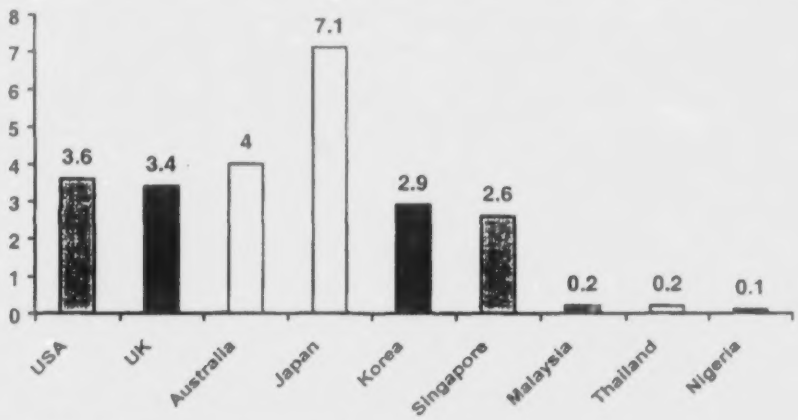
The situation in Thailand, however, began to change rapidly in the mid-1990s, and it could be transformed altogether by the end of the first decade of the 21st century. Moreover, secondary education attainment is likely to increase significantly when the full impact of the National Education Act of 1999 takes hold. In just six years, Thailand's gross secondary enrollment ratio increased by a half, rising from 40 percent in 1993 to nearly 75 percent in 1998 (ONEC statistics). The numbers of both secondary and tertiary education graduates will surely continue to grow rapidly for some years to come.

Figure 1.9: Percentages of Population (25-64 years) with Tertiary Education in Selected Countries



Source: OECD Education at a Glance, OECD Indicators, 1998.

Figure 1.10: R&D Workers per 1,000 People in Selected Countries, 1999



Source: UNDP Human Development Indicators.

Linkage between Human Capital and Economic Growth

Current theories of economic growth place a strong emphasis on the importance of two factors: investment in human capital and improvements in technology (Becker at al. 1990; Barro 1991; Mankiw et al. 1992). Higher levels of educational attainment have been shown to increase

individual worker productivity, and continued technological advancement further enhances productivity, even in countries where educational attainment levels are already high.

An example where the empirical evidence is strong and compelling is the United States. Investment in schooling grew more rapidly there from 1910 to 1950 than investment in physical capital. Research has shown that the increase in average years of schooling explains 25 percent of the growth of *per capita* income during this period (Becker et al. 1990).

A regression analysis of 30 developed and developing countries was conducted as part of this study. The analysis indicated a positive correlation between economic growth and the "education index," a weighted variable (UNDP 1999) that takes into account both primary and secondary enrollments. Secondary enrollment is statistically stronger in explaining GDP growth than primary enrollment, perhaps because most countries in the sample had already achieved close to universal primary enrollment. In the future, for most countries, and certainly for Thailand, secondary education is likely to be the key factor that will determine global competitiveness.

A cross-country statistical analysis by Robert Barro indicates that human capital has played a special role in endogenous economic growth (Barro 1991). Barro showed that both primary and secondary school enrollments were significantly correlated with per capita income growth in the sample of countries.

Historical Rates of Return to Education and Training

Research on Thailand demonstrates a strong correlation between educational attainment and individual earnings. This basic point has been demonstrated in studies dating back to the 1970s (Blaug 1987; Chalongphob and Yongyuth 1996; Pichai 1979; Vuthiphong 1984). New studies have tested this assumption with more recent data and demonstrated that rising demands for skills in the late 1980s and early 1990s depressed wages for workers with low levels of education and from poor backgrounds, as compared with those who are better educated and more privileged (Chalongphob and Yongyuth 1996; Hawley 2000). Indeed, interviews with parents and employers in the 1990s demonstrated that employers in the manufacturing and service sectors now demand workers with at least a lower secondary level of schooling (Beach, Schwille and Wheeler 1992; Orapin 1991). Historically, therefore, we see rising relative earnings over time for workers with higher levels of education (Hawley 2000; Kakwani and Son 2000).

In addition to studies that estimate rates of return by *level of education* completed, some researchers have looked at the relative payoff to different *kinds of schooling* – namely, to the general and vocational tracks. Since the 1980s, a number of international agencies have favored investments in *general* education. This judgment reflected research showing that the general skills learned in secondary education provided a better foundation for work as well as for further education. The evidence, however, at least in Thailand, is mixed. Blaug found no significant difference in the earnings of vocational and general education graduates in a sample of Bangkok workers in the late 1960s. Using comparable data, also for Bangkok, Pichai reported higher monthly earnings for vocational-track upper-secondary graduates than for graduates of the general track (Pichai 1979). In 1994, the National Education Commission sponsored a study that reported a social rate of return to vocational secondary education of 7.2 percent, whereas the comparable rate

for general secondary was only 2.4 percent (cited in Moock 1996). However, in 1994, a very high proportion of those who completed upper secondary education continued their studies at the tertiary level, and those few who did not, it can be argued, were a special group- especially *slow academically,* as compared with most other students who made it into upper secondary school, or especially *rich* - rich enough not to care about the income premium associated with continuing on to university (Moock 1996).

The estimates rates of return to education depend importantly on the data used and particular models specified. Two analyses, completed for this World Bank study and using more recent data, like the earlier studies offer inconclusive findings on the relative returns to different types of secondary education. Kakwani and Son show that, during the period of the economic crisis, *vocational*-education upper-secondary graduates had higher average monthly earnings than those who had finished general upper secondary (Kakwani and Son 2000, table 17). Hawley, too, shows that vocational graduates earn more than general secondary graduates, but that this difference has narrowed since 1985. Taking into account the private and public costs of vocational and general secondary education, the relative returns on the two investments seem to be about the same (Hawley 2000).

Productivity and Technologies for Sustainable Growth

In the years prior to the economic crisis of 1997-98, the key factors contributing to Thailand's robust economic growth were its abundant natural resources and its cheap labor. The country, however, is rapidly losing its comparative advantage based on these two factors, as steady population growth has put pressure on available land and other natural resources, and as wages have risen without commensurate increases in labor productivity. The countries with which Thailand hopes to compete in the future have moved steadily into areas and modes of production that are more and more technology-intensive, leaving Thailand behind. Since the crisis, remarkable recovery has been achieved, with economic growth estimated to be positive again and perhaps above 4 percent in 1999 and 2000. This rate, however, is less than half that enjoyed in the decade before the crisis.

In order to ensure sustainable growth in the future, Thailand will need to advance its development and adaptation of new technologies, and to implement other policies directed at increasing the productivity of its labor force. Special efforts should be made to raise the productivity of labor, and the value of production, in agriculture, as this sector still employs about half of all workers and has the potential to contribute more to Thailand's economy. The industrial and service sectors should also be strengthened by increasing the productivity of labor and preparing workers with the appropriate skills needed to compete in the knowledge-based global economy. The key to success in these areas will be the outputs of the education and training system. With the education reforms now underway, production in Thailand should be able to move up the value-added ladder and compete more successfully in the global economy.

2. IMPETUS FOR CHANGE

A. Global Market Forces and Implications for Skills Needed

Globalization - the increased competition for markets, economic interdependence of nations and dependence on knowledge - reinforces the importance of education and skills as a basis for a nation's competitive advantage and social development. Thailand will need to make further gains in both educational attainment and learning outcomes to strengthen the country's human capital stock and competitiveness, prerequisites of continued sustainable growth. Education will also be an important factor in assuring social cohesion, supporting democratic institutions, promoting health and protecting the environment.

Simply giving more children and young adults access to affordable education will not be enough. Assuring competitiveness will require that those who leave school are better equipped to meet the needs of a market-based economy. Firms around the world that wish to compete globally face similar challenges. A growing body of research across a variety of industries has demonstrated a strong link between a firm's productivity and how work within the firm is organized. This research shows the growing importance of involving front-line workers in production decisions and quality assurance. Making good use of new technology is important as well, as are the quality of human resource management and development of new skills. The changes in work organization, increased attention to quality and introduction of new technology create new demands on workers and, indirectly, on the education and training system.

Currently, many school and university graduates entering the labor market are not equipped to meet employers' current needs, let alone the needs of a future characterized by even more sophisticated technology and greater service orientation. New forms of work organization and production systems will require new kinds of skills. Private sector firms find it difficult to recruit individuals with adequate ability in solving problems, finding creative solutions, working in teams and communicating effectively with others. Finding graduates with strong English skills is also difficult. The current education system is not producing enough graduates at the secondary or post-secondary level who have these practical skills, which are critically important for global competitiveness.

World-Wide Trends

Whereas, for the foreseeable future, only a minority of jobs will require a college education, nevertheless, more and more will require workers with higher levels of skills. The world's best companies have abandoned old hierarchical methods of organizing work and have adopted new ways of managing workers to assure advances in productivity, better quality and greater variety and speed of new product introductions. In high-performing firms, front-line workers are required to

take greater responsibility and use skills not needed in the past. This is true in service industries as well as the manufacturing sector. Recent research in the United States shows that the earnings of secondary school graduates increase as they master "new basic skills," valued by employers. These skills include a strong base of literacy and numeracy, but, also the following (Murnane and Levy 1996):

- ability to solve semi-structured problems where hypotheses must be formed and tested
- ability to work in groups with persons of diverse backgrounds
- ability to communicate effectively, both orally and in writing, and
- ability to use personal computers to carry out simple tasks like word processing

The authors of this work argue that the "new basic skills" are the minimum which youths need to achieve middle-class jobs in the United States. This research is critical in that it highlights both how the nature of work is changing and also how knowledge and skills matter.

One consequence of the global market and demand for quality is the growth in internationally recognized standards. The International Organization for Standardization (ISO) is a worldwide federation of national standard bodies established in 1947. Firms that seek ISO recognition are often those firms producing high-end products and demanding front-line workers with the knowledge of precise techniques needed for gauging quality and assuring customer satisfaction. The rising interest in knowledge of ISO in Thailand reflects the increasing demand for quality in the goods produced for export markets. Local markets are also beginning to demand ISO standards. Many local as well as foreign clients will only deal with firms that are ISO registered. As firms introduce changes in work organization that involve ISO, the daily work and skill requirements of workers can and do often change. The ISO standards are in the process of being revised; the new version will give greater emphasis to continuous improvement of practice, and this will likely require more from all workers.

Private Sector Views From Thailand

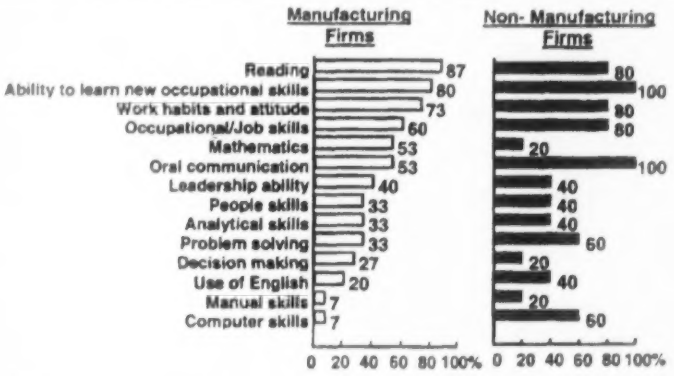
One of the critical questions which Thailand faces is how to expand and improve the quality of secondary education. While the new National Education Act calls for universalized secondary education, it leaves open the question of whether students should enroll in general secondary programs or more vocational programs, and also the question of what it is that students should know and be able to do as a result of their schooling. A recent World Bank study illustrates how 20 establishments from six sectors - food, textiles, garments, electronics, auto parts and service related industries - actually recruit and select workers in their effort to compete successfully in the global economy (Abelmann et al. 2000). The study examined how establishments responding to global competition deal with questions related to work and skill by looking at how entry-level workers are recruited and selected. This research is useful in focusing attention on those that skills school leavers should possess and showing that Thailand's needs are not so different from other countries'.

Managers were asked to rank the importance of different skills when considering a new entry-level applicant. The study found that work habits and attitudes were the most important

factors, followed by the ability to learn new occupation skills and people skills. An applicant's ability to learn new things was seen as more important than specific occupational skills. For the banking, insurance and service industries, skills in English and computers were the most important when considering a new entry-level applicant.

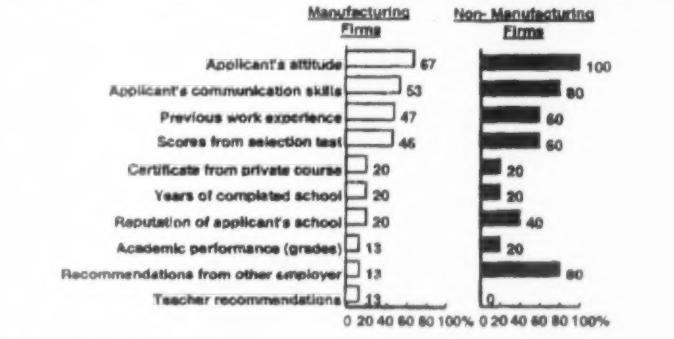
The responses and comments from managers suggest that while technical skills are valued, employers do not expect graduates of secondary vocational programs to have many of the specific skills they will need. Employers were often more interested in assuring workers were "ready and willing to learn" than knowing what they learned in school. In fact employers show little or no preference for graduates of secondary vocational programs and generally assume that they will have to give training to get the specialized skills needed. Most of the firms see the ability to work with others as a critically important skill. Often managers asked applicants about activities during their school days and social activities in which they now participate to gauge how well they will work with others.

Figure 2.1: Skills Viewed as Important by Firms Hiring Entry-Level Workers


Manufacturing Firms
Non- Manufacturing Firms
Reading 87 80
Ability to learn new occupational skills 80 100
Work habits and attitude 73 80
Occupational/Job skills 60 80
Mathematics 53 20
Oral communication 53 100
Leadership ability 40 40
People skills 33 40
Analytical skills 33 40
Problem solving 33 60
Decision making 27 20
Use of English 20 40
Manual skills 7 20
Computer skills 7 60
0 20 40 60 80 100%
0 20 40 60 80 100%

Source: Abelmann et al. 2000.

Figure 2.2: Other Factors Viewed as Important by Firms Hiring Entry-Level Workers


Manufacturing Firms
Non- Manufacturing Firms
Applicant's attitude 67 100
Applicant's communication skills 53 80
Previous work experience 47 60
Scores from selection test 46 60
Certificate from private course 20 20
Years of completed school 20 20
Reputation of applicant's school 20 40
Academic performance (grades) 13 20
Recommendations from other employer 13 80
Teacher recommendations 13 0
0 20 40 60 80 100%
0 20 40 60 80 100%

Source: Abelmann et al. 2000.

BEST COPY AVAILABLE

The high performing electronic and auto-parts manufacturing industries are particularly rigorous in assessing and guaranteeing product quality. In such firms, workers need to be able to understand basic statistics and to read complicated graphs related to quality monitoring. In some cases, the front-line workers are responsible for the collection of these data. Recruitment of the right kinds of workers is taken very seriously. One of the high-performing auto firms surveyed in the study conducts group interviews with multiple applicants, with two or three interviewers meeting with five-to-ten applicants at a time. This allows the firm to see who functions well in group situations and can handle conversation with strangers. Many of the large and high performing firms from the banking, electronics, auto-related and food-processing industries also give an English test when recruiting new employees. The firms in the survey with the lowest education standards, those in the garment and food preparations sector, until recently had no education requirement but now have established a minimum requirement of primary or lower-secondary school completion. These jobs continue to be low-skill and low-wage, and workers who move up in these establishments tend to be those who entered with higher levels of education.

The increasingly knowledge-based economy will require Thailand to assure a skilled, flexible and adaptable labor force. The demand for low-skill workers will likely continue to decline, and workers with limited education will have only low-wage opportunities. Changes in products and services will mean workers will need to be able to adjust and respond as the market changes. Reforming the current education system while supporting its expansion will require a substantial investment in curriculum and assessment, infrastructure and instrumentation, and in both the current and future teaching force to respond to the growing demand for new kinds of teaching and learning. This will be true at the upper secondary level and tertiary levels. As these reforms take place and as the system expands, it will also be critical to monitor and support the performance of the poorest regions and poorest students. In pursuing the target of universal secondary education, authorities should guard against different degrees of access across socio-economic groups and geographic regions. Authorities should also guard against differences in the quality of provision that result in differences in educational outcomes - exam results, rates of progression from one level of education to the next and employment of graduates. It will also be important to meet the needs of adult learners in the workplace and particularly those of the less fortunate who are unemployed or underemployed.

B. Legislative Basis for Education Reform

The Constitution of 1997 and the National Education Act (NEA) of 1999 are innovative and far-sighted legislative undertakings that compel basic reforms in the system of education and training. The legislation is broad, but the discussion below concentrates mainly on aspects that bear on secondary education. The legislation incorporates nine principal features, each of which is summarized below.[5]

[5] All numbers in parenthesis below refer to Sections of the NEA.

Principal Features

Compulsory and Free Education. In accordance with section 43 of the Constitution of 1997, all individuals have an equal right -- if they so choose -- to free education of 12 years of duration of assured quality (10). Compulsory education, however, is defined as nine years of basic education (or age 16, whichever comes first) (17). Compulsory education and the option of twelve years of free education are to be implemented within five years of promulgation of the Act (i.e., by August 21, 2004 (72)).

Learning Objectives. The NEA stresses life-long learning (8) with a balanced orientation in which knowledge, skills and attitudes (such as moral values) play appropriate roles. Learner centered teaching is the aim (22), with proportionate emphasis on general knowledge, languages, culture and science as well as knowledge and skills required for career development (23). Curricula are to be diversified to reflect these goals (28). Additional flexibility is to be built into the system by ensuring that credits for study in any level and type of institution are readily transferable to other institutions (15, 16).

Devolution of Administrative Functions (37-39). One of the main thrusts of the NEA, in keeping with Constitutional directives, is to move from centralized to local control of education. Within three years (71), by August 2002, authority for administration of all non-degree education must be devolved to educational institutions themselves or Local Education Areas (LEAs). LEAs are authorized to prescribe curricula relating to local needs, overseeing both public and private educational institutions. The span of authority includes delivery of the curriculum, budgets and personnel administration. LEAs are to be governed by local committees comprised of representatives of the community, private and local administrative organizations, associations of teachers, education administrators and parents as wells as religious leaders and scholars. In addition, degree-granting institutions of higher education are to become legal entities with self-autonomy under an independent board of directors.

Consolidation of Central Administration (32-36). Within three years (71) the present organization of at least 14 separate bodies for the central administration of education and training will be collapsed into four main units, with a small number of separate agencies for special purposes. The National Council for Education, Religion and Culture will oversee policies and plans for the sector as a whole. The Commission for Basic Education will encompass all functions for basic education which is defined as pre-primary through grade 12 (4, 16). The Commission for Higher Education will cover non-degree and degree programs after grade 12. The fourth Commission will handle religion and culture.

Teachers and their Development (52-55). All teachers and educational personnel in public institutions are civil servants under a Teacher Civil Service Organization, but administration of personnel affairs will be done by LEAs. An independent organization is established for teachers and education administrators with power to set standards, issue and withdraw licenses and develop the profession. Teachers and administrators of both public and private institutions are required to have professional licenses, except for informal education. A fund will be established to help raise professional standards. The NEA calls for a law on salaries and remuneration to ensure congruence between the social status and income of teachers.

Quality Assurance (47-51). An Office for National Education Standards and Quality Assessment is provided. All education institutions must have in place procedures and criteria for internal quality assurance. In addition, all schools must undergo external evaluations every five years. The first round of external evaluation is to be completed within five years.

Financing. Public financing will be delivered to LEAs through block grants. Financing for education will not be limited to state funds, but will be mobilized from all segments of society (58). The state and LEAs are authorized to levy educational taxes. Incentives for non-public contributions include tax rebates or exemptions. Income generated by public educational institutions may be used by the institutions for educational purposes (59). The state must provide free education to those wishing it up to 12 grades (10). The state is charged to distribute subsidies for basic education per head "on an equal basis." (60).

Private Education. Section 81 of the 1997 Constitution compels the state to support the private sector to provide education. The NEA affirms the right of private bodies to provide education as prescribed by the state (12) and stipulated independence for the management of education by the private sector with the state being responsible for standards and overseeing quality (43). LEAs are directed to make due consideration and take into account the views of the private sector in implementing national education plans (45). In terms of governance, private education institutions will have to become legal entities and be governed by their own boards drawn, *inter alia*, from owners, staff, parents and community leaders (40, 44). The state may also provide financial and academic support for private education (46), including grants, tax rebates and exemptions, low-interest loans for "eventual self reliance and the establishment of a State and Private Education Development Fund" (60).

Vocational Education. The NEA says little about vocational education except that vocational education and occupational training will be provided in an array of institutions including those owned by state, private sector and enterprises (or collaboration between institutions and enterprises) under the rules and regulations stipulated in a Vocational Education Act (20), which is now being drafted.

Implications

The NEA has far-reaching implications for reform of secondary education.

Role of the state. Section 43 seems to suggest a different role for the state vis-a-vis private educational institutions. Rather than regulation, the role of the state will be to "oversee, monitor and assess educational quality." This could imply a much-needed shift away from control of inputs to a focus on achievements and outputs.

Decentralization. One of the biggest risks with decentralization (or devolution) is loss of quality. How can institutions at the local level provide the kinds of support needed to maintain and increase quality? This is particularly true for poorer districts which do not have the resources of wealthier urban areas. The NEA deals with the issue in several ways: nationally established core curricula (27); internal and external quality assurance (47-51); licensing and upgrading of professional staff (52-55); and possibly normative financing with compensation for poorer districts.

Another risk concerns management capabilities and readiness to assume greater responsibilities and functions at local levels. Plans for decentralization must include substantial amounts of continuous training for local personnel, both in LEAs and the management of training institutions.

Financial impact. The biggest financial impact will be at the upper secondary level (grades 10-12) for two reasons: First, only about half of the present age group is enrolled at upper secondary level, compared with about 90 percent at the lower secondary level. The state will take over financing any one who wants to continue from lower to the upper secondary level. This means the "free" provision of places most probably in general secondary education. The removal of financial constraints on attendance probably argues for a major increase in enrollments at the upper secondary level. Second, it also means that the state will assume the financing of places that currently are financed almost entirely by the private sector, e.g. in private general and vocational secondary schools. These enrollments represent 35-40 percent of enrollments in upper secondary, or up to 10 percent of the entire national group between the ages of 16 and 18.

Subsidies to private institutions. Once the system of free tuition is fully in place, schools will not be allowed to charge tuition or extra educational fees. The per capita subsidy for private schools, however, will cover only operating costs and will exclude capital costs. The question is whether greater efficiency can finance the needed capital investments. Also, for the first time private educational institutions will have access to state support for teacher development. Teacher salaries in private schools will be regulated more closely. All private schools must have a salary scale in place with regular increments based on length of service.

Economies in the central administration of education. Merger of the 14 plus units of the Ministry of Education into four basic units could yield significant cost savings. At present the Ministry of Education has upwards of 20,000 employees in Bangkok. Perhaps half to two thirds of the positions could either be abolished or transferred to the field.[6] Shedding of staff at this level of magnitude poses its own risks.

In summary, this legislation is a landmark that provides both the opportunity and impetus for comprehensive reform of the education system including secondary education.

---

[6] One of the conditions under the Social Sector Adjustment operation, financed by the Asian Development Bank, is to reduce by 25% the number of staff positions in the Ministry of Education. The Public Sector Reform Loan also calls for the MOE to be restructured as a public service delivery agency.

3. GOVERNANCE AND ADMINISTRATION

Legislation makes reform of secondary and vocational education imperative. The chapter below sets out some principles to guide the administrative reform. They pertain to the role of the various key actors, namely: the central government; local governments; training institutions and the private sector. These are discussed in sequence below.

A. Role of the Central Administration

Role of central administration. Central governments typically have the power and authority to do almost everything in secondary and vocational education. They can establish curricula, produce teaching materials, hire, pay, discipline and upgrade teachers and supervise administrators. They also, typically, provide most of the financial inputs. The temptation is strong for the central government to do everything. However, this temptation should be resisted. Even though it has the power, the central government cannot do everything well. It is important to accept the limitations of the central government and understand its comparative advantage in administration of the school system.

The proposed Vocational Education Act should delineate clearly the functions for which the central government has a comparative advantage. The role of the central government should focus on setting policies and standards, monitoring achievements and ensuring that needed inputs are appropriately financed, including equitable distribution of resources. The comparative advantage of central government is not to administer or deliver education. The job of the central government is to set the framework within which institutions can excel. These principles are clearly imbedded in the NEA which calls for devolution of administration and delivery of education to the educational institutions themselves or the lowest levels of administration (local education authorities, LEAs). In turn, some vital functions cannot be done at all, or be done efficiently, at the local level. These include policy-oriented research, long-term planning for the system as a whole, establishment of a framework of standards and guidelines to facilitate education and training delivery (including incentives for industry and private providers), fair distribution of scarce state resources among competing claims (including provision for disadvantaged groups), and monitoring/assessment of results and dissemination of information about performance to the public. Other functions, if organized centrally, can also capture economies of scale, such as development (but, not delivery) of core curricula, teaching materials and teacher training programs.

Policy coordination. Another principle for governance of the system of education and training, stated explicitly in the National Education Act, is "unity in policy and diversity in implementation" (9). In other words, there are multiple roads to the same destination. The system should follow a common policy. However, this is made difficult by the existence at present of at least nine government ministries involved in training through 1,736 institutions, plus at least ten

semi-autonomous public agencies.[7] This diversity underscores the importance of following a unified policy. At present there is no organization short of the Cabinet of Ministers that can address policy questions in vocational education and training.

One option being considered is to establish a National Technical and Vocational Education Council with at least 50 percent representation by employers.[8] Similar organizations exist in Australia and the U.K. The proposed Council would operate on a transparent basis and would be responsible for establishing training standards based on skill competencies, accreditation of institutions and assessment of training outcomes. The Council would be assisted by Industry Training Advisory Committees, made up by 75 percent industry experts and 25 percent teachers/instructors. These sector-specific Committees would propose competency-based occupational standards as the basis for a national qualifications framework. This review supports the establishment of the proposed National Council and Training Advisory Committees along the lines proposed in the " National Framework for Technical and Vocational Education in Thailand." This kind of organization would focus attention on actual competencies required in the workplace, as defined by employers, would integrate all training providers and would have independence from the bureaucracy.

Types of central control. A related question arises about what kind of central control is most appropriate in a devolved system. The issue is not whether the central authorities should control the system. They must exercise some control to be able to account for the use of public resources. Rather, the question is what kind of central control is most effective. A corollary of devolution is that the central government should de-regulate the provision of inputs and move towards controlling the outputs from the system according to agreed specifications and criteria. This means moving toward the definition of output standards and monitoring their achievement. The NEA makes encouraging movement in this direction. It states that, for private schools at least, the role of the central government should be to "monitor, oversee and assess educational quality" (43).

Consolidation at the center. The NEA also calls for the consolidation of the current 14 departments/agencies into four basic units plus specialized agencies. The Office of Basic Education will handle all secondary education, including vocational education. What is not clear is how vocational training will be managed at the level of the central Ministry of Education, Religion and Culture. Presumably it will fall under the Commission for Basic Education for education and training up to grade 12, and the Commission for Higher Education for non-degree programs. Split central administration could be a complicating factor. The central administrative "home" for vocational education should be addressed in the forthcoming law on vocational education.

Administering vocational education. Thought is being given in Thailand to the best administrative structure for vocational education within the formal school system. One of the options being considered is to have vocational institutions fall under technical colleges rather than the LEAs. The reasoning goes that vocational education and training is specialized and needs

---

[7] ONEC Policy Study, p. 4.

[8] See "National Framework for Technical and Vocational Education in Thailand" for details, including balance between employers and government representatives, selection criteria for Council representatives, terms and conditions of service.

professional support. The colleges would be best placed to provide the technical support rather than LEAs. However, this option seems to replace one centralized structure at present with another. Supervision of satellite institutions by technical institutions has been problematic in other countries. LEAs may require technical assistance from outside for vocational education, but the principle of local control should also be followed with vocational education. Local control has the distinct advantage of linking vocational education with the perceived needs of the locality, and enhances linkages with the local labor market. The proposed Vocational Education Act should adhere to the principles of local control and avoid establishing a new centralized, hierarchical structure for managing vocational education.

B. Role of Local Authorities and Training Institutions in a Devolved System

Effective results in education and training can be obtained through local control over the delivery of education and training. Local institutions (LEAs or the education/provider) should have autonomy to use resources and make decisions on delivery, and be held accountable to higher authorities for results. Linkages with employers, an underlying principle of any reform in vocational education and training, is best done locally. That can facilitate adaptation of course offerings to local labor markets. Quicker adjustments can be made locally to changes in the labor market. When local institutions have the freedom to decide their own course of action, and the responsibility to deliver quality outputs, it also opens the possibility for local resource mobilization. It becomes their, rather than a distant Ministry's, responsibility to ensure that inputs are adequate to the task. Fortunately, this kind of devolution of authority is explicit in the NEA. Training institutions should be given increasing autonomy to run their own internal affairs and be held increasingly accountable for the results they generate. As a corollary to increased autonomy, the central government will place limits and priorities on their funding as a tradeoff to more institutional autonomy.

Putting devolution into practice inevitably will require major changes in the way secondary institutions, particularly vocational, do business. The Ministry of Education exerts almost hermetic control of institutions at present at the secondary level. Curricula are rigid and centrally-prescribed. No changes can be made in teaching programs at the local level. For example, school administrators cannot reduce the number of hours students spend on traditional typewriters in favor or word processing or other computer skills in strong demand. The educational institutions themselves will also undergo major changes. At present the boards of private educational institutions mainly reflect the ownership and serve only advisory functions, but in the future such boards must have representative membership and will have executive powers. Successful devolution, in the final analysis, depends on the capacity of local institutions to carry out their new responsibilities and functions. Substantial, continuous and prolonged in-service training will be required to build and sustain the management and implementation capacity of LEAs and schools alike.

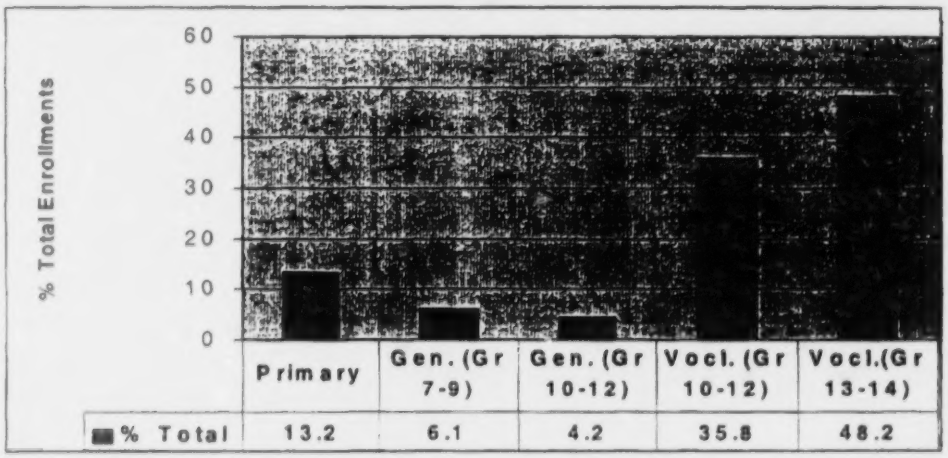
The new Vocational Education Act should carry devolution further by defining more precisely the authority and responsibilities of the education institution at the secondary level. Specifically, secondary and vocational education institutions should have the right to (a) guidance from central authorities in terms of standards sought, (b) support from central authorities in terms of core curricula, teaching materials, in-service training of staff, and equitable distribution of public

subsidies, and (c) freedom to adapt teaching programs locally and to mobilize, keep and spend resources.

C. Role of Private Providers

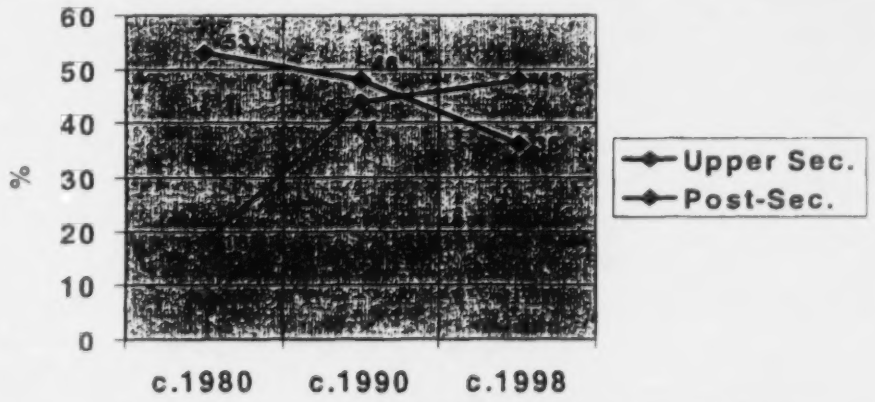
As shown in Figures 3.1 and 3.2 below, private providers are an important feature of Thai education at secondary and post secondary levels, particularly in vocational schools. However, the proportion of enrollment in private vocational schools has been declining at the upper secondary level as the state provides more places in public institutions.

Figure 3.1: Private as a % of Total Enrollment by Level and Type of School, 1998



Source: OPEC

Figure 3.2: Private Vocational Enrollment as a % of Total Enrollments by Level



Source: Office of the Private Education Commission, Ministry of Education

BEST COPY AVAILABLE

Thailand has a robust system of private vocational education with a long tradition. The value added of formal private vocational education in Thailand is significant. Private vocational schools provide the opportunity for continued education for about 250,000 students at the upper secondary level, or about 7% of the age group 15-17 who otherwise would not be able to attend upper secondary school. Private vocational schools cater to those who cannot find places in public institutions which correlates with lower achievement and probably also lower socio-economic status. Private vocational schools thus make an important contribution to equity at the upper secondary level. Moreover, the schools provide these educational opportunities at virtually no cost to the public. The private schools operate at less cost per student than comparable public institutions, even though teacher qualifications and class sizes are about the same. Pending verification through a costs study, the cost per student appears to be a third higher in public than private vocational schools.

Private education and training is highly beneficial for Thailand. First, private education has the potential to help raise quality by providing competition with the public sector. If public institutions are subsidized on the basis of number of students, and students can choose freely which types of schools (public or private, general or vocational) to attend, then attracting more students is a means of sustainability. Better relevance of programs and quality of teaching are factors that tend to attract more students. In this way both public and private institutions have an incentive to raise their levels of quality. Second, private education stimulates innovation within the system. School administrators have an incentive to find new and better ways to provide education and training. Third, private education saves public resources to the extent that households pay some of the costs that otherwise the state would have to pay. Even with increased subsidies, such as foreseen under the NEA, private schools will still be expected to finance the capital costs of upper secondary education.

Private schools are over-regulated by the government at present. The managers of private institutions are not free to manipulate resources so as better to compete with public institutions. They are not free to innovate in teaching content. At present the only way to increase income is to increase the number of students because all the other factors are controlled: tuition, class sizes, number of student class periods per week, number of teaching period per week for instructors and even starting teacher salaries. The consequences of this over-regulation have been failure to realize potential quality improvements and expansion of coverage through greater efficiency (less cost per student.)

Another principle for educational reform is that the state should promote a diversity of providers operating on a level playing field. This was a basis for the reform of technical and vocational education in Australia in the 1970s.[9] First, the state must recognize that VET can be provided by many different organizations and arrangements (including at the workplace.) The state needs to encourage a greater number and variety of training providers. Second, all providers, both public and private, must be treated equally. A "level playing field," as defined in the Australian report, is a "situation where every vocational education and training provider is participating and competing on an equal basis; no one set of institutions has power over other institutions, as is now the case." All institutions should play according to the same rules and be held accountable for the

[9] The Kangan report, as cited in "National Framework for Technical and Vocational Education in Thailand."

same results. Fair competition means three things: (1) equal subsidies for all institutions, e.g. per student regardless of type or ownership of school; (2) free student choice so that funding follows the students and is derived from student choice; and (3) absence of regulation on tuition, class sizes, teaching loads, etc. (i.e., on inputs) so that the institution is free to manage resources to achieve the desired outcomes.

The Ministry of Education plans to de-regulate private schools so that they are "more free to administer their work." This will not be automatic or easy. Greater subsidy tends to equate with greater control. When private schools begin accepting public subsidies the natural tendency will be to impose more, not less, control. Financing typically comes with strings attached, and there is already excessive control without public financing. The logic for government control of private education is compelling. It is also wrong. If private institutions are to be paid on the same basis (for recurrent costs) as public institutions, the reasoning goes, then they should have the same standards and quality. Therefore the state must ensure that state standards apply to private schools in terms of teachers, plant and equipment, curricula, class sizes, etc. Already in the new law, private institutions will be required to reorganize their governance, install teacher salary scales, etc. These are additional regulations. It is not clear what regulations, if any, will be removed. Care must be taken to ensure that implementation of the new law results in less rather than more regulation of private schools.

In the medium term it would be advisable for Thailand to shift from controlling inputs to controlling outputs (e.g., graduates who meet standards of achievement in both academic areas and practical skills). Conceivably subsidies could be paid per qualified graduate rather than per student attending school. The government would "purchase" the product rather than subsidize the process.

In summary, the sweeping administrative changes directed by legislation have substantial risks. The center may cling to old executive functions. Staff may resist and derail planned consolidation. Educational achievement may be sacrificed through devolution of service delivery to LEAs because of insufficient local administrative capacity or funding. The potential contribution of the private sector could be missed through the perpetuation of rigid controls. However, these risks are greatly outweighed by the potential benefits of the administrative reforms. The reforms promise better definition of standards, better linkages of education with local labor markets, better resource mobilization from local levels, greater innovation and competition to raise quality and savings of resources.

In the final analysis, progress in education depends on the productive collaboration among the three parts of the system, central administration, local public institutions and private schools. Collaboration, in turn, depends on a clear understanding or appropriate roles.

- The center should concentrate on policies, standards, monitoring performance and equitable allocation of resources.
- Local institutions should receive guidance and support (e.g. finance and staff training), but be free to manage resources and be held accountable for results.
- Private institutions should also be free of unwarranted regulation and be able to compete for resources with public institutions according to the same conditions (i.e., a level playing field.)

4. USING MARKET FORCES TO GUIDE DECISIONS

Vocational education and training is preparation to perform the tasks required for work in an occupation. In the simplest terms, VET can be driven either by its own supply or by the demand for the products. Educators, trainers and bureaucrats tend to dominate supply-driven systems. The principal motivation in supply-driven systems is to expand courses and to increase inputs into existing schools and programs, that is, more students, teachers, buildings and equipment. There is little incentive to change and adapt course offerings. What happens to those who finish the training is not the primary concern. In the extreme, a supply-driven system is inward-looking and myopic. It has been expressed by some vocational school administrators as follows: "Our job is to train the students. What happens to them after they leave is not our concern."

By contrast, a system oriented to demand looks outward. It takes its signals from the absorption of graduates in related employment and their productivity on the job. Employers themselves define the competencies required on the job as the foundation for the content of training. Employer-defined competencies become the standard by which to judge the quality and effectiveness of the education or training. A market driven system requires close, almost organic, links between institutions and employers. Employers have a decisive voice in defining the content of teaching programs, and adjusting the numbers and kinds of occupations taught.

Student demand is often used as a proxy for employer demand. Students look out for their best interests and will seek education and training in fields that have the best prospects. This requires information about job opportunities and levels of remuneration so that students and households can make rational choices about available options. The primary role of government, too often neglected, is to provide consumers with up-to-date information about trends in the labor market. This includes information on employment rates and wages by occupation and information about the performance of specific training institutions (completion rates, achievement rates on exit examinations, employment of graduates and wages). By the same token, lack of good information for consumers means poor choices and sub-optimal resource allocation. Thailand at present collects some information about employment rates and wages by occupation, although not in sufficient detail, nor on performance of individual schools and training institutions. The problem is dissemination and lack of access to this information by the public.

Using market forces thus means relying on employment demand or student demand to direct the system of education and training. Decisions on content of curriculum must reflect national goals of Thailand, but otherwise should be market-driven (the interplay between supply and skills demanded by employers.) Effort needs to be put into finding what skills employers value. Employers stress a desire for workers with core skills, such as, the ability to communicate orally and in writing, to learn on the job, to work harmoniously with others and to meet the discipline of the workplace.

Considerable discussion has taken place about how much vocational education should be provided in Thailand in relation to general secondary education - should it be 50:50? 40:60? Some other ratio? Similarly, the debate continues as to how much private provision there should be at the secondary level, particularly in vocational education. One principle on which this report is based is that decisions on the balance between general and vocational education, and between public and private provision should not be made a priori but should be the consequence of market forces, i.e. be "market-driven." Rather than make an arbitrary policy decision for the whole country, the advice given here is to let students determine the balance by their choice of schools. If vocational secondary schools offer better prospects (both in terms of *quality* and *type* of education), then students will gravitate to them. Similarly, if the private schools offer good quality programs in marketable skills, students will opt to attend them over public schools. Free student choice should be the rule, guided by ample information about employment, career prospects and school performance.

One area where student demand needs to be mitigated is in the demand for diplomas, certificates and degrees. In Thailand exceptionally strong demand exists for higher education degrees. This pursuit may be rational for a household, to the extent that entry to attractive jobs is defined by those credentials. However, the important thing for productivity improvement is not the credential, but what the graduate can do (or can learn) on the job. Therefore, a basic principle for the future is to focus on employer-defined competencies rather than on diplomas or certificates or degrees. What counts is what the graduates can do, not the number of courses or hours spent in meeting the requirements for a certificate or degree. It may be possible for Thailand to integrate the two concepts, i.e., to modify credentials so that they reflect competencies. For example, the teaching certificate could be modified to verify that the individual has mastered certain competencies or demonstrated certain behaviors during practice teaching which are specified in the teacher training curriculum.

Most previous attempts at "manpower planning" or "manpower forecasting" in market economies have failed throughout the world.[10] It has proved impossible for the most part to predict far in advance the specific skills that will be needed in the marketplace, in part because growth of firms and labor requirements is *dynamic*, leading to frequent and unanticipated *changes*. This poses an awkward dilemma for training institutions: how can technical or vocational skills be provided that require years of preparation? The best answer is to avoid early and narrow specialization.[11]

As shown in Figure 4.1, one of the striking features of private vocational education in Thailand is that most graduates with qualifications do not enter the labor force directly, but continue on to further studies. This is an issue because the purpose of vocational education is preparation for the world of work. It does not require preparation over several cycles to acquire the necessary skills for most forms of employment. Consequently, the additional cost of vocational preparation at the secondary level (compared with general education) may be wasted. If most graduates do not enter

---

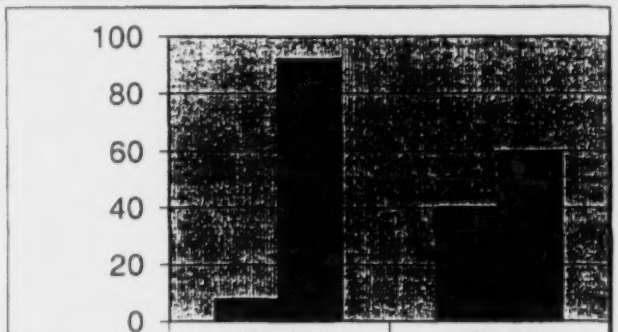
[10] For example, as documented by R. Hollister in the evaluation of the OECD's Mediterranean Regional Project in the 1960s.

[11] One exception to the principle of avoiding early specialization occurs where this can be closely linked with employment. Dual Vocational Training (DVT) has proved to be quite successful in providing alternative periods of employment-based training and school-based instruction.

the labor market on completion of studies, this calls into question the rationale for certificate-level vocational studies. The irony of the situation was illustrated by one private school manager who stated that the school increased the proportion of time devoted to practical studies at the lower-certificate level so that graduates could "work better in business." Yet more than 80 percent of the lower-certificate holders from the institution continued on to further education.

The educational pyramid at the upper secondary level in Thailand resembles more a "stovepipe" than it does a pyramid. Most students continue on to further studies.[12] This is not bad, per se, particularly if the additional education is privately financed. However, it calls into question the purpose of vocational content and immediate preparation for the labor market at the upper secondary level. If students do not enter the labor market after Grade 12, what is the justification for the state to finance the extra costs of vocational education (compared with general education) at that level?

Figure 4.1: Destination of Graduates from Private Vocational Schools
(Estimated percent)



	Gr. 12	Gr. 14
Enter LM	8	40
More Sch.	92	60

Source: ONEC (upper secondary) and Bank estimates (post secondary).
Note: LM = labor market; Sch. = School

A rigid dichotomy between general and vocational secondary is false. Another guideline for reform of secondary education is to make general education more vocational and vocational education more general. Making general education more vocational does *not* mean adding workshops and specialized training programs to general secondary schools. That has been tried over the world, including in Thailand, especially in the 1970s. However, research shows that the

[12] Moreover, the new law may inadvertently reinforce the stovepipe. Tuition charges will be possible only at the post-secondary level. Therefore, to capture tuition income, private vocational schools will have a strong financial incentive to channel students from their lower certificate programs directly into their upper certificate programs.

extra costs for the practical programs - which are difficult to sustain anyway - are not justified in terms of better labor market outcomes for graduates (compared with academic secondary education). Making general education more vocational *does* mean greater exposure to the world of work so that those not going on to the next level of education know about possible options in the labor market. After all, the ultimate goal of secondary education is to make the person a productive member of society over his or her lifetime. That is a very "vocational" notion.

Vocational education has been overly specific. At present the curricula of vocational secondary education are dominated by practical studies. Only about one fourth of the time in vocational secondary schools is devoted to general preparation; in contrast, more than 60 percent of the time is spent on teaching vocational skills. The amount of time spent on practical work makes little sense at the secondary level either in view of the "stovepipe" flow of students mentioned above, or the fact that graduates can expect to change jobs and careers several times during a working life.

Strategic options for Thailand are:

- shift the balance more towards general preparation within vocational education, and ensure that skills taught are less occupationally-specific and applicable to a variety of occupations;
- use vocational courses to enhance learning of general subjects;[13] and
- defer skill training until the later years of study at which time the career destination of students may be clearer.

Over time vocational training should become either post-formal education (after completion of regular schooling) or post-secondary.[14] Short, intensive skill development after completion of formal schooling can be more efficient than long, drawn-out vocational courses within the formal school system. Trainees will have made up their minds better on what they want to do. Training can be linked better to employment opportunities.

Consideration in Thailand, reportedly, is even being given to the introduction of vocational curricula at the *lower* levels of the education system, including primary and lower secondary.[15] However, experience elsewhere has taught that it is not a good idea to provide vocational skills in

---

[13] One example of this is the "tech-voc" approach in the U.S. Practical subjects are used to teach general principles and content. The practical application of theories often makes it easier for the learner to grasp the concepts.

[14] Of course, the profile may change as more students enroll in upper secondary education. A change of clientele may mean that more students will terminate at the end of secondary education. Options for students who complete formal education would be to (a) undergo on-the-job training provided by employers, or (b) undertake short, intensive skills training for which employment is likely or already identified. It also underscores the importance of establishing and maintaining good tracer information on the destination of graduates to inform future policy choices.

[15] ONEC Policy Study. Pre-vocational curricula already exist at both primary and lower secondary levels in the "basic occupational skill workshop."

primary education or even lower secondary schools.[16] One reason is that most occupational skills can be learned relatively quickly on the job and do not require long pre-service preparation. Another reason is that employers tend to prefer mostly general preparation - as mentioned elsewhere in this report.

Premature introduction of vocational content diminishes attention to the basics. At the primary level the priority has to be acquisition of generic basic skills such as reading, computation, communications, etc. It is acceptable to include foundations for vocational skills at the lower secondary level, but this should be general introduction to the world of work and not aimed at skill acquisition. Even at the upper secondary level, most students have not yet made a commitment to occupations, and vocational education can be wasteful as a result. In keeping with the overall principle, this review opposes early introduction of vocational subjects in the formal system of basic education.

A final market principle is to promote an open and flexible system for life-long learning. The NEA is explicit about the objective of life-long learning. Traditionally, workers remained in one occupation for a lifetime. Modern experience, however, is dominated by changes in technology and the emergence and decline of enterprises relatively quickly in response to global competition. Workers in this context must be prepared to change jobs and even occupations several times during a working career. One way to promote rapid adjustment to changes in supply and demand of skills is to encourage flexibility in the system of education and training. Flexibility means the capacity to respond quickly to changes in demand.

The present system is structured inflexibly. Formal vocational education programs are all the same length, three years for the lower certificate (Gr. 10-12) and two years for the upper certificate (Gr. 13-14). This uniformity is not imposed by the competencies being taught, and leads to filling out many courses with irrelevant content.

Some means to build flexibility include: deferment of specialization as close as possible to the point of entry into the labor market; providing post-education training in short, intensive, job-focused programs; and increasing the facility with which resources can be redeployed within the system (e.g., fewer expenditures on hard-to-change fixed training institutions and more investment in short courses.). It is surprising that formal vocational education institutions in Thailand have not been more involved in adult training, through evening classes of short courses.[17] Financial incentives should be provided for them to do so, such as allowing them to charge fees and keep the proceeds. The system should also allow flexibility in the application of resources, such as the hiring of more part-time teachers and instructors. Flexibility can also be enhanced through a system of credits where completion of some courses can be counted towards entry or fulfillment of

---

[16] The typical, but faulty, reasoning to justify vocationalizing basic education often goes as follows: Students finish basic education without any useful skills for making a living. They, therefore, become unemployed. Avoiding unemployment must be the responsibility of the formal school system. Therefore, the school system needs to be changed to incorporate specific skills training, even for students who drop out from basic education.

[17] The Department of Skills Development of the Ministry of Labor provides short, intensive training programs and evening courses for adults. However, more diversity should be stimulated by tapping the resources of the existing vocational schools.

programs elsewhere. One particular area is to recognize formally on the job training. As stated in the Australian report included in this study, "The great tragedy of the present TVE system is that it fails to formally recognize TVE training within industry."[18] The contribution from industry to TVE can be quite significant, for example in hotels, the automotive manufacturing industry and in banking.

In sum, the proposed Vocational Education Act should emphasize:

- government collection and dissemination of information about employment, wages and institutional performance;
- a demand-driven system (employer requirements or student demand);
- employer definition of required skills;
- competencies mastered by the trainees rather than time spent in institutions or courses taken;
- deferment of specialization as much as possible until after formal schooling or, at least, until after secondary education;
- general skills, such as, writing, oral communication, working in teams, problem solving, following instructions at the secondary level in both vocational and academic secondary schools; and
- flexibility in the duration of vocational programs and in the deployment of resources.

[18] See "National Framework for Technical and Vocational Education in Thailand," for the paper "Reforming TVE: Cost Effectiveness," prepared by the project advisor, Peter Fleming, for the project Task Force.

5. PROMOTING QUALITY OF EDUCATIONAL OUTCOMES

As access to secondary schooling in Thailand continues to increase, the country will need to give attention to what students know and can do as a result of their schooling. Thailand has been open to examining student performance through its national assessment program and participation in international studies. Even with the efforts to date, however, there is limited information readily available about student performance levels in core subject areas across secondary programs, vocational and general. There is also limited information for comparing the qualifications of core subject teachers across school types. Promoting quality will require: (1) setting clear and consistent content and performance standards for what students should know and be able to do, (2) assessing, reporting and rewarding student, teacher and school performance, (3) harnessing technology to support both student and educator development, and (4) supporting teachers and school administrators throughout their careers to support student learning.

How Thailand supports decentralization to the regional and to the school level will be critical in determining how schools and school communities can contribute to educational quality. While the Ministry may delegate more management responsibility, it must also recognize that capacity across provinces is uneven and there is a potential risk for growing inequity. Thus, the Ministry will need to support weaker provinces to develop the institutional capacity to manage resources. In some cases, additional financial resources will be needed from the central government.

A. Establishing Content and Performance Standards for Students

One important function of a national ministry and/or state and local governments, depending on the degree of decentralization, is to assure a broad base of support and understanding for what it is that youth are expected to be able to do at different points in their education. Thailand faces the challenge of educating a generation of citizens who can deal creatively with complex issues associated with civic participation, rapid urbanization, global economic competition, innovations in agriculture and potential environmental degradation. Whereas Thailand, like most countries, has an official curriculum, curriculum documents often do not make clear what core competencies all students are expected to acquire. Many OECD countries have raised the level of discussion on the knowledge and skills to be taught and learned in schools. These competencies are often referred to as content standards. Such standards can be set for each grade and subject. Content standards are less specific than curricula and can be regarded as "flags," reflecting valued goals that should guide the curriculum. In order to be more effective, standards need to be written in clear and explicit language, firmly rooted in the content of the subject area(s) and detailed enough to provide guidance to teachers, curriculum developers, assessment staff, parents, students and all others who will be using them.

In addition to being specific about what students should know and be able to do, it is also important to establish performance standards that indicate what students must demonstrate in order to show that they have achieved the specified content standard. Performance standards require one to answer the question, "how good is good enough?" They guide both teachers and assessment designers to determine a student's performance level. The shift toward defining content and performance standards needs to be coupled with a shift away from a narrow focus on defining educational inputs, such as how many books are in the library and how many courses a student needs to take.

A core principle to guide reform at the secondary level in Thailand is that there should be broad discussion and debate to set both content and performance standards expected of all students regardless of the type of secondary school they attend or what ministry or department is responsible for the administration of the school. The National Education Act of 1999 supports the establishment of educational standards and implementation of a system of quality assurance. Industry associations have expressed an interest and willingness to be involved in this work. The process of setting content and performance standards needs to involve teachers, the university community and representatives from the private sector, where most graduates will work. Including employers in the process assures that the educators stay connected and are responsive to the market.

In the study of Thai firms done to inform this report as well as in studies from other countries that examine high-performing work organizations, there is a common set of skills that appears to be important. Standards should reflect broad skills that allow for life long learning, including areas like written and oral communication in Thai and English, problem solving and computer skills. It is clear that new employees have to know how to learn on the job. This requires initiative and willingness to undertake self-study. Finding people who can work in a team and resolve problems without needing constant guidance is also important. Workers need to be able to communicate effectively, and for many firms, communication needs to be in English. While computer skills are growing in importance and are now a requirement for some entry level positions, in other cases, basic computer skills can be acquired on the job or in informal training, if the individual has basic general skills and a willingness to learn. The current Thai curriculum framework gives local regions the authority to decide a part of the curriculum. Thus, the dialogue around standards will need to take place at both the national and locals.

Australia, the United States and a number of other countries have experienced, over the past two decades, an increase in general secondary education programs and a decrease in the number of secondary vocational schools. Many believe that early tracking of students at age 14 or 15 limits learning opportunities and maintains structured differences between different social strata. Many countries have begun to move more industry-specific job training to tertiary level institutions and to work more closely with the private sector to define specific industry standards for purposes of designing curricula. A Thai-Australian partnership is running a project to develop competency-based curricula for the training of skilled workers and technicians in the automotive, electronics, plastics and retail sectors. This effort involves a partnership between teachers and industry representatives and between government and industry to work on industry standards, and it builds on Australia's earlier experience (box 5.1).

Box 5.1: Reform of Vocational Education in Australia

Prior to 1972 Australia's secondary education system followed the traditional model with students in secondary school divided into general and vocational streams. The vocational, or technical high schools, were supplemented by Trade Schools providing one day per week tuition to trade apprentices. Students who entered the vocational stream rarely found a pathway to a university education.

In the early 1970s national inquiries into general and vocational education were held. A strategy was adopted to implement dramatic reforms to make education more student centered yet relevant to living in a constantly changing world. In summary, the following actions were taken:

- Technical high schools were abolished and all secondary educational became general comprehensive. (In more recent years many schools have re-introduced vocational subject options.)
- Trade schools were absorbed into new post secondary vocational institutions known as TAFE (Technical and Further Education) Colleges or Institutes. These TAFE colleges initially accepted students from secondary years 9 and 10, but progressively lifted that entry requirement to years 11 and 12.
- The compulsory school leaving age was increased to 16 years and targets were set, and later reached, to increase retention at secondary school to 80% in year 12.

This whole process took approximately 10 years.

In 1990 two further vocational education reforms occurred.

The term TAFE was abandoned in favor of VET (Vocational Education and Training) so that the dominance of government owned TAFE colleges could cease in favor of creating the following:

- a industry driven curricula based on competency standards
- an Australian Qualification framework to allow better matching of qualifications to occupation levels
- a "level playing field" and thus a training market accessible to all providers

Seven core competencies were identified and introduced into all primary, secondary and post secondary programs both as district modules and also as part of the learning process.

Provided by Peter Fleming, Consultant to Thai –Australia project developing a National Framework for Technical and Vocational Education, April 2000.

A review of the current curriculum, learning outcomes and market demands will need to determine at what level students should learn industry-specific vocational skills. While such a review is taking place, secondary vocational education will need to give greater emphasis to general

skills, as discussed above, while also assuring that there is no double standard between the content and performance standards for students across the two tracks. While there has been an effort by the Ministry of Education's Department of Curriculum and Instruction to make the curriculum and guidelines consistent across general, non-formal and vocational education programs, students in vocational programs get much less of the current core curriculum. Currently, vocational courses only require 30 credits for what is called the basic course, which is delivered separately from the vocational subjects. While the teachers who teach the core basic subjects within vocational schools have the same degree as those who teach in general upper secondary schools, no empirical evidence is available to know whether or not lower quality teachers end up in vocational schools due to a difference in status or compensation.

While in the short term, greater coordination can assure that more rigorous content and performance standards apply to the vocational schools to assure graduates have the skills and knowledge they will need to continue to be life long learners, a careful examination by government must decide whether to continue to support narrowly defined industry-specific vocational training at the secondary level. Although it is possible to integrate content standards with the learning of vocational skills, it is less clear how distinct the educational tracks should be at the secondary level.

Currently the strongest secondary vocational programs have strong links to employers, but these are a minority of programs. The Department of Vocational Education, with support from the German Government, has a number of dual vocational training (DVT) programs, whereby vocational schools and colleges work closely with private sector enterprises. One benefit of the DVT approach is that it stimulates and challenges instructors and teachers to meet labor market demands. While DVT can work for some secondary students, these students should receive the same core competencies as other secondary students. Ideally students currently leaving a vocational program should not be restricted from entering a university program and students leaving upper general secondary should be able to enter a tertiary-level vocational institution. The DVT model also operates at the tertiary level, and this is where it may be most appropriate.

While some vocational subjects might be a part of the general program, we would advocate that Thailand not use vocational programs as substitute for general secondary education. In some parts of the United States, general secondary schools are being called "career academies." Each student takes a core of academic courses and receives work-place exposure plus career counseling. Using an occupational theme, such as the law or health care, the schools integrate occupational and academic material relevant to this theme. While students develop individual occupational and career goals, they do not earn formal occupational skill credentials. The schools work with employers to help design school curriculum, to mentor trainees and to place them in summer internships.

Thailand, like other countries, will not be able to move all technical and vocational education quickly to the tertiary level. Some of the current vocational secondary schools in urban areas could be reoriented so as to provide post-secondary vocational training, to increase capacity and cost effectiveness as well as increase the percentage of secondary students who receive a strong general education. These post-secondary vocational programs could provide flexible learning opportunities for the growing numbers of urban unemployed workers, and also contribute to the expansion of post secondary education. Such a transition will take time, but hopefully, as the

transition takes place, strong general education will come to be seen by all as preparation for higher education whether academic or technical in nature.

B. Measuring Student and School Performance

Classroom curriculum and instruction should be aligned with standards and assessments. Alignment alone, however, does not assure a teacher's ability to assist students to achieve what is expected of them. School systems need to ensure that teachers agree on clear goals and that there are adequate incentives that focus attention on improving teaching and learning. A number of countries and local states are exploring a variety of recognition programs to reward high-performing schools that either have high levels of performance or that show continued growth in academic achievement. It is also important to have intervention strategies that help low performing schools to improve.

As Thailand moves toward a quality-based education system with high standards for all students, the current examination system will likely need reform. The new Office for National Education Standards and Quality Assessment will have a critical role in this regard. It will be important to assure that test design, implementation and usage are improved to support a curriculum that assures the "new basic skills." Different assessments can serve different purposes, and it will be critical to assure an overall strategy that produces information that can guide reforms. As the education system begins to define what students should know and be able to do, by establishing content and performance standards, it will be critical to be clear what strategy will be used to assess student performance. Thailand has been a leader in developing a national assessment program to monitor education progress through a sampling of students. It will be important to assess if the current system is providing the type of information about student performance that is useful in guiding reforms. It will also be critical to assess the benefits and potential consequences of basing entrance into upper secondary and higher education institutions on assessment instruments developed at an individual institution level or by Government.

To improve the quality of education, the Ministry needs to continue its review and reform of its national assessment system and prepare itself for supporting provinces and/or municipalities that might want to implement additional assessment programs. The design of assessments are critical as they communicate the goals of the system and often shape the behaviors of teachers and students. Well-conceived assessments that correspond to course goals and priorities can focus student attention on the knowledge and skills that the Ministry decides are most important for students to learn. Poorly conceived assessments can prompt students to cram facts and figures, which may then soon be forgotten. Since tests are often used as models of curricular and instructional design, they often shape the behavior of the entire school system.

Student testing can be used as a diagnostic tool to identify current problems within an education system. National assessment programs can evaluate the performance of the system over time and assess whether goals are being achieved. Depending on the sample of students and schools tested, the results can be used in different ways. If all students in certain grades are tested, regional and school comparisons are possible, as are student comparisons based on different background characteristics. For example, monitoring performance by gender can assure that girls

are not at any disadvantage. While assessment information and comparative data alone will not improve a system, the information can be used to guide, monitor and target reform efforts.

Many countries, including Uruguay, Chile and the UK, have begun to use assessments also as an accountability tool. For example, Uruguay is using student assessment to help schools and teachers improve learning outcomes and the teaching and learning process. Results of assessments are returned to the schools, where the scores are explained and compared with other schools, equivalent from an SES perspective, and with the rest of the country. In Chile, information about student performance is shared with parents and informs how they select schools. Information about school performance is also used to reward schools. In some other countries, students are held accountable for mastering certain standards, but teachers as well as school administrators can also be held accountable for some defined level of average student achievement, or increase in achievement. Where assessment is used for accountability purposes, student testing has the express objective of urging the behavior of teachers and schools in certain directions through the allocation of rewards and sanctions. If however rewards or sanctions are too great, the type of responses from educators can narrow what gets taught and in some cases even trigger cheating. While the two uses of assessment (as a diagnostic tool and as an accountability tool) are not mutually exclusive, they are quite different, and they have different implications for who gets tested and for the nature of the tests that get used.

We have little information about how well students are performing across different types of school. A challenge that Thailand will face is whether and how to develop assessment systems that will tell how students perform relative to the newly established standards instead of how they perform relative to other Thai students. Traditional norm-referenced tests only do the later. Currently, in Thailand, one knows the espoused curriculum and how much time is allocated to different subjects, but little about whether actual practice matches espoused policy and little about how students perform across different types of schools. Getting the rhetoric right is easier than putting in place the practices associated with changes in learner outcomes.

Supporting assessment as a tool for reform must be more than a strategy at the level of the central ministry. It should infuse the entire system and guide behavior at the level of the individual classroom. How teachers develop and use assessments in their daily teaching is critical in determining how much students learn. Teachers can make assessments that reinforce poor practices as easily as they can make assessments that motivate and build higher-order thinking skills. Assessment results should be shared with parents in an accessible format so they can understand how their child is doing and how the school is performing. Parents can provide an important role in monitoring and supporting school improvement.

C. Harnessing Technology

Technology when used well can be a powerful tool to reduce costs, increase access and expand the range and quality of education and training. Technology, whether radio, TV, free standing computers or computers connected to the internet, can be used to enhance the quality of teaching and learning and the delivery of effective lessons whether for students or teachers. The internet can be used to access and share knowledge. Thailand has begun to design, fund, and maintain a technology infrastructure for secondary schooling following a national master plan. The

effort involving expanding technology in secondary schools is currently managed separately for vocational and academic schools and deserves greater coordination. The challenge the Ministry faces is how to harness the investment in the infrastructure to see that it translates to improvements in the teaching and learning process. Central government will be unable or find it very difficult to shoulder this investment alone. It will need to support partnerships with the private sector and foster local governments and school communities to invest wisely in technology and assure its maintenance.

While technology fluency can be an end in itself, technology is also a means to enhanced instruction and communication. A growing number of jobs require workers to have basic computer skills. Assuring that secondary level students acquire these basic computer skills can assure job preparedness. This is particularly true across many service sector jobs. Technology can also help educators enhance both the curriculum and how it is delivered. Technology can link students, teachers and community members to new sources and forms of information not previously available. It also can provide powerful ways to deliver professional development activities and support professional networks. Finally, technology can be used to promote greater efficiency in how schools are administered.

Thailand is making a substantial investment in supporting over 400 mid-size secondary resource schools that will have a common package of hardware, software and connectivity. A subset of schools get additional resources to reach out to smaller schools. The implementation of this program is strategically designed to assure that at least one school in every secondary school cluster participates and that schools have affordable access to the internet. There appears to be no parallel program for vocational schools, and the mixed administrative structure of the vocational sector makes such coordination difficult.

A critical challenge will be to see that teachers and principals have the training and support they need to help students learn how to use technology to promote greater learning while continuing to expand the number of schools with access. It will be important to assure that high quality software, outside of the usual package of word processing, spread sheet and presentation software, exists in the local language. As more schools have access to the internet, on-line resources will also grow in importance. As clear learning standards are established, efforts will be needed to support high-quality software and online curriculum aligned to the standards. Careful attention must be given to assuring that technology is appropriately selected and procured to match the actual needs of schools. While mobilizing the resources for the investment in hardware is a challenge, it is in many ways a greater challenge to assure that high-quality software exists and the "human" dimension receives substantial training to assure that the use of the hardware and software contributes to national goals.

Many other countries have begun to establish standards for both students and teachers in relation to the use of computers, and such experiences can help inform Thailand. As long as access to computers is not universal, standards should not be mandated. However, voluntary standards can guide teacher training, both pre-service and in service, and also focus how students use computers in schools. Standards can also assure some consistency in how students learn to use computers across different types of secondary schools. Technology literacy can be a great asset in preparing youth for the workplace.

As technology grows in importance, the Ministry of Education should provide on-going evaluations to measure the success of technology use and government policies and programs. Such evaluations can involve surveys of educators and students about the use of technology as well as in-depth case studies of schools to examine how technology is being integrated into the school program. One area to monitor carefully is the risk of a "digital divide" between those who have access to technology and those who do not. While technology has the potential to reduce disparities based on geography or economic status, if deliberate efforts to assure access to the poor and rural areas are not made, graduates of these schools will likely face more limited choices for entering the labor market. Such studies and monitoring should inform policy and the design of future interventions.

D. Supporting Teacher and Principal Capacity

Simply defining and measuring student outcomes will not be enough. Teachers and principals will need on-going support and development to upgrade their knowledge and skills. Teacher development will need to be aligned with what students are expected to know and be able to do. In some cases, this will require that teachers upgrade subject knowledge, and in other cases, it will require teachers to improve pedagogy. Just as it is important to define standards for students, standards for teachers should also be defined, measured and reported. A critical principle to guide reform is that the Ministry should ensure that pre-service and in-service teacher development is consistent in assuring all teachers meet minimum standards and have the support for continuing development. Under the National Education Act, teachers will be required to have at least a bachelor's degree and school administrators at least a master's degree (Bangkok Post, May 5, 2000). They must also have a professional license by 2002. The license process should be designed to assure some level of proficiency based upon more than just the time spent in a degree program.

The identification of standards should not mean that all training ends up looking the same, since different students will have different needs and will learn in different ways and at different rates. Instruction, whether for students or teachers, needs to connect to a learner's setting, building upon current knowledge while acknowledging potential differences in cultural beliefs and practices. Teachers must be prepared to individualize instruction. Teachers need to know students well enough to be able to anticipate needs and facilitate learning, and school heads need to know the teachers well enough to provide the support needed.

Teachers in the same building and within the same school cluster need to establish strong professional communities to share practice. School staff must find the time to review the progress and needs of each student. Schools should be able to compare their performance with other, comparable schools. Such analysis at the school level can help inform what professional development is necessary. Professional development can be delivered in a variety of ways, both formal and informal. The delivery of training programs should not be exclusively "chalk and talk." It should include discussion, video-presentations, visits to other schools and case examples. Teachers might need to visit other classrooms or other schools to see how instruction can be delivered in alternative ways. Teachers might need assistance in deepening their content knowledge in how they work to develop critical thinking and understanding with their students.

Finally, compensation structures for teachers and principals are important. Thailand needs to assure that entry-level salaries are competitive and high enough to attract strong graduates into teaching. Pay structures should not simply be linked to years of service. Payment should also reflect performance and level of responsibility. Schools, districts, and the national government can use effective teachers as mentors for entry-level teachers and reward this additional responsibility.

Finance and Equity Issues

The 1999 National Education Act, especially the clause committing Government to provide secondary education "of quality" and "free of charge" to all school-age Thais by the year 2004, has obvious implications for the government budget. It raises questions as to whether, and how, this measure will be affordable - especially in light of the financial crisis that hit Thailand in July of 1997, resulting in a GDP in 1998 which was 12 percent below the level of 1996. The economic slowdown led to reduced government revenues in 1998 and, consequently, a reduced government budget. Although education was "protected" relative to most sectors in the budget,[17] spending on education fell. The original 1998 budget, which was already in draft when the full effect of the crisis became known, had 98,105 million Baht allocated to basic education. In the revised budget, this allocation was reduced to 90,481 million Baht, a cut of nearly 8 percent (Cresswell 1999, p. 30). A reduction of this magnitude would have made it difficult for Government to maintain education programs even at the levels of 1997. Figuring out how to fulfill the additional mandate of free basic education for all by the year 2004 is a daunting challenge.

An analysis carried out by the Thailand Development Research Institute (TDRI) as part of the larger study led by ONEC and the World Bank projects the costs of providing secondary education under a number of alternative "cost scenarios" or sets of assumptions (TDRI 2000):[18]

Scenario 1: Counter-factual, "business as usual" scenario, asking the question, "*What if* the Education Act had *not* been passed?" This analysis is based on a simple extrapolation into the new century of enrollments in the 1990s.

Scenario 2: This scenario looks at the spending increase necessary to achieve universal secondary education at the earliest possible date but uses constant, pre-1999 "unit-cost" (spending per student) to estimate the total cost of this expansion. This is the *base-case reform scenario*.

Scenario 3: Same as 2, but with reduced unit costs, reflecting *higher student-teacher ratios* - partly the natural result of the increase in enrollment levels and partly the result of deliberate government policy.

Scenario 4: Same as 3, but with higher unit costs, reflecting *higher teachers' salaries and benefits* - implemented in an effort to attract and retain more qualified, more

---

[17] Education's share of the total budget rose from 10.0 percent in 1997 to 11.3 percent in 1998 (Cresswell 1999, p.30).

[18] TDRI's study focuses on *recurrent* costs only. The secondary education reform program could involve additional costs for longer-lasting inputs (construction of new school classroom, for example) that count as *development* or *capital* costs. Some costs such as the procurement of computer equipment, which may have a useful life of 3-5 years, do not fall neatly into either the recurrent or capital cost categories, but for purposes of TDRI's study, computers are treated as a recurrent input (see Scenario 5).

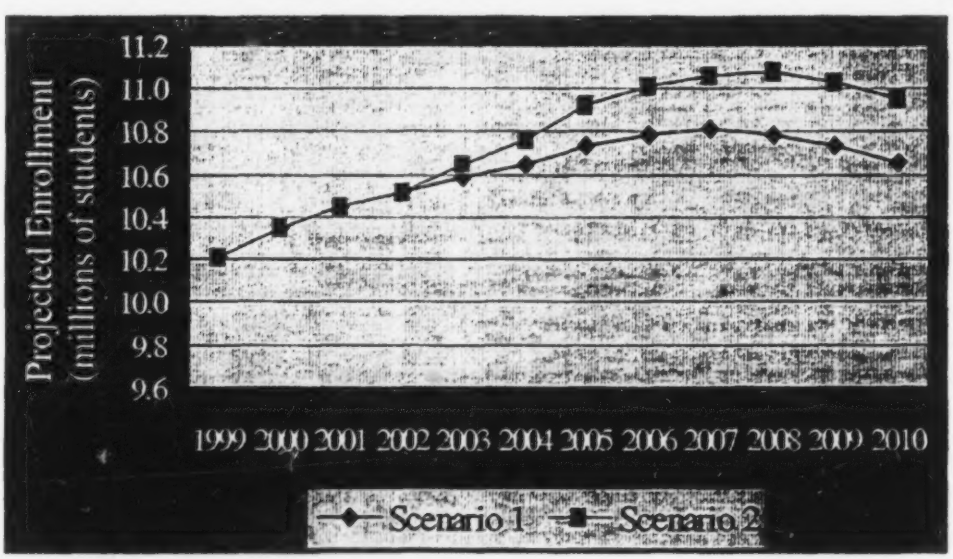
motivated teachers in the system, thereby raising "quality" (i.e., student learning outcomes).

Scenario 5: Same as 4, but with even higher unit costs, reflecting *increased instruction in areas of information technology*, considered important to Thailand's global competitiveness in the new century.

Scenario 6: Same as 5, but with the addition of *targeted scholarships* to ensure the participation in secondary education of hard-to-reach, poor children.

The first two cost scenarios are driven simply by enrollment projections for the years 2000-2010,[19] using (in the absence of recent census data) new population estimates produced by a demographer at Mahidol University, and based on assumptions by the researchers at TDRI on increases in the gross enrollment ratios and on the elimination over time of under- and over-age students now in the system. According to TDRI's projections, had the National Education Act *not* been passed (Scenario 1), secondary enrollments would have risen gradually in the first years of the new century and peaked in 2007. With, however, the enactment of the new law, which extended compulsory education to cover the first *nine* years (instead of the first *six* only, as in the past) and which will abolish tuition fees for all 12 years of basic education by the year 2004, enrollments are projected to increase more rapidly after 2002 and to peak one year later, in 2008 (figure 6.1).

Figure 5.1: Enrollment Projections for Scenarios 1 and 2, 1999-2010



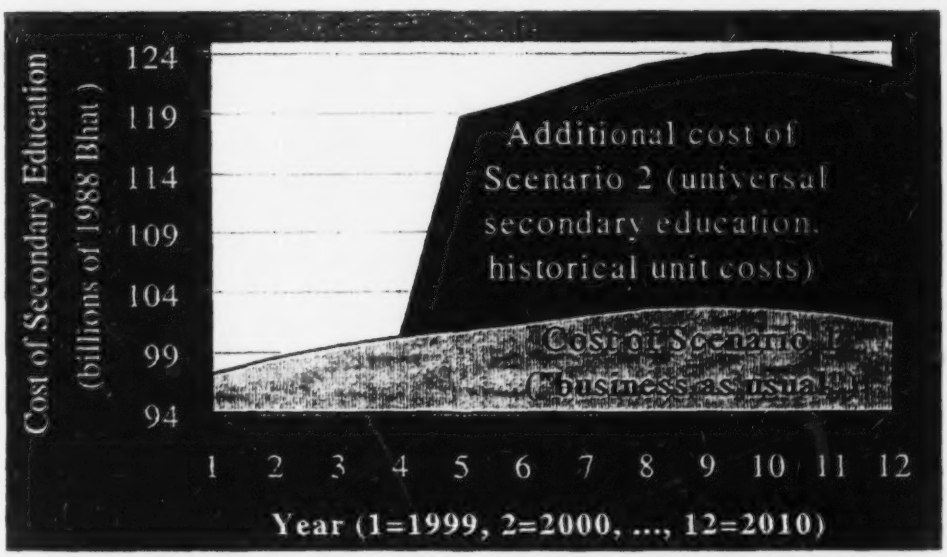
Source: TDRI 2000.

[19] Figures for 1999 were observed enrollments.

BEST COPY AVAILABLE

If it were realistic to assume that unit costs (i.e., spending per student) would remain the same in the future and would not be affected *either* by the additional students enrolled in secondary education *or* by changes in the educational production function, the cost to Government of moving from Scenario 1 to Scenario 2 is shown in figure 6.2.[20] The additional cost per year would be between 18 and 21 percent in each year, beginning in 2003. This scenario is probably affordable, especially to the extent that Scenario 2 can be dismissed as a kind of "straw man," since the increasing enrollments brought about by the reform program will tend to increase average school size, which in turn should result in various economies of scale, the most important of which could be an increase in the student-teacher ratio. This then leads us to a consideration of Scenario 3, under which unit costs, while higher than those under Scenario 1 until 2006, become lower in 2007 and are lower thereafter.

Figure 5.2: Recurrent Cost to Government of Scenarios 1 and 2, 1999-2010



Source: TDRI 2000.

Scenarios 4 and 5, however, are scenarios of enhanced education quality. Scenario 4 involves a costing of the Government's tentative plan to raise teachers' salaries and benefits. The purpose of the Government's plan is to encourage more of Thailand's "best and the brightest" to enter teaching and to remain in the profession throughout their working careers - something that was by no means assured in the past, especially during the prosperous years before 1997.

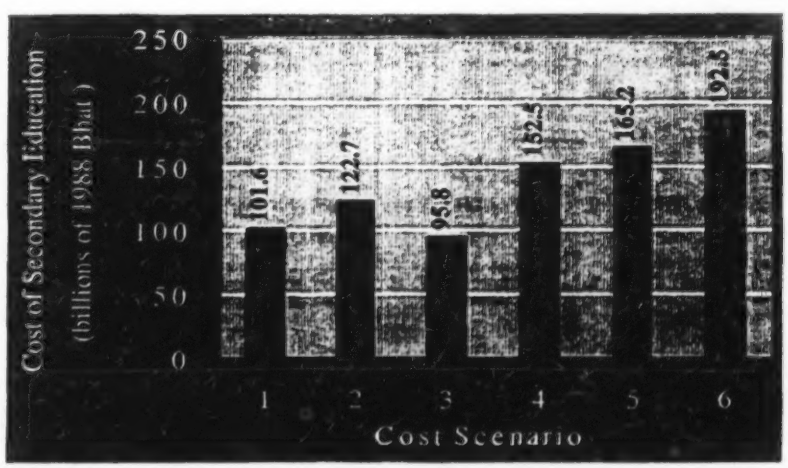
[20] Also assumed for Scenario 2: The proportion of secondary students enrolling in private schools will remain the same as in 1999, and Government will subsidize private school students at the level of 40 percent of unit costs in public schools.

BEST COPY AVAILABLE

This plan may be sensible, but that really depends on how it will be implemented. Raising the compensation for teachers *on average* does not necessarily mean that *all* categories of teachers should receive the same increase. The structure of salaries and benefits ought to be seen as a strategic policy instrument that can be used to achieve priority goals in the education sector. There is no "one size that fits all." Some categories of teachers may be in very short supply, while there may be a surplus of teachers in other categories. Thailand should move to a multiple pay structure for teachers, which will allow, for example, teachers in mathematics and the sciences (who have good job prospects outside teaching) to be paid more than teachers of arts subjects, and those teaching in remote areas (where many qualified teachers may not want to go) to be paid more than teachers in urban centers such as Bangkok. The question of "hardship allowances" and other incentives to attract teachers to remote areas may be complex, in that housing and other living costs might be lower in such areas. The principle here, however, is that decisions on teacher compensation should be pragmatic and market-driven. What teachers "should" be paid is what is *needed to attract them* to those places and into those subjects where they are in short supply. A multiple pay structure should be easier to achieve under a decentralized education system, which Thailand has begun to implement, than it would have been under the more centralized structure of the past.

Either of the two plans (Scenarios 4 and 5) intended to produce universal enrollment of school-age individuals in secondary education while *at the same time* improving learning outcomes will be expensive, increasing significantly the annual cost of secondary education in Thailand. Figure 6.3 presents the projected costs of all six cost scenarios in the year 2010. The projected cost of secondary education under Scenarios 4 and 5 is 50 and 63 percent higher than under Scenario 1, (the "business as usual" scenario) and 59 and 73 percent higher than under Scenario 3 (the scenario which saves on salaries by introducing higher student-teacher ratios).

Figure 5.3: Comparative Recurrent Costs of All Six Scenarios in 2010



Source: TDRI 2000.

BEST COPY AVAILABLE

The message to be derived from this analysis is that Thailand's secondary education reform program will be, from a budgetary standpoint, quite expensive to implement. In 1998, secondary education (academic, vocational and other) accounted for about 25 percent of the total education budget. Education, in turn, made up about 25 percent of the total national budget, which accounted for about 16 percent of GDP (Cresswell 1999, pp. 51-53). This information allows us to estimate the *impact of the secondary reform program on the education budget and on the national budget*, as well as to estimate the cost of program in relation to GDP.[21] If the future were to look like Scenario 4, then the impact of the reform program on the education budget would be 13 percent. Its impact on the national budget would be 3 percent, and the cost of the program in relation to GDP would be a half of one percent. If, on the other hand, the future looked more like Scenario 5, then the impact of the program on the education and the national budget would be 16 and 4 percent, respectively, and the program would consume a slightly larger share (0.63 percent) of GDP. Is this realistic and affordable? That is for the Government of Thailand to decide, but there is little doubt that this cost will be felt and that it will "pinch" somewhere.

Some of the increased budget for secondary education will probably have to be diverted from other government programs. Which programs in other sectors (roads? health? defense?) or programs in other sub-sectors of education (pre-school? primary? tertiary? special education?) will it be possible to "squeeze," so as to help finance the secondary education reform program? Any answer to this question is sure to have political repercussions.

In addition to reallocation within the government budget, it may well be possible to eliminate *inefficiencies* which now exist in (secondary) education in order to reduce the additional budget needed for education and, in particular, what will be needed to achieve the goals of the reform program. Since 1980, *pupil-teacher ratios* have fallen in Thailand and are today only slightly above 20:1 in both primary and secondary education. This ratio is close to the East Asia regional average (20.7) in the case of secondary education, but it is only about two-thirds the regional average (31.1) in the case of primary (World Bank, Education Statistics Database). Increasing the pupil-teacher ratio, even by only a few pupils per teacher, could achieve significant salary savings. Increasing the pupil-teacher ratio *by 50 percent*, bringing it up to approximately the regional average, would have an *enormous* impact - although, for political reasons, this would need to be done gradually, taking advantage of attrition and not replacing (all) teachers as they retire or otherwise leave the teaching service. In 1998, pre-primary and primary education accounted for 44 percent of the total education budget in Thailand; salaries accounted for 73 percent of this (Cresswell 1999, p. 58). By reducing the number of teachers by one teacher for each three now teaching at this level, the budget for pre-primary and primary education would be 24 percent less than it is now, and the total budget for education would be 11 percent less. This efficiency gain by itself would be nearly enough (but not quite) to finance the secondary education reform program.

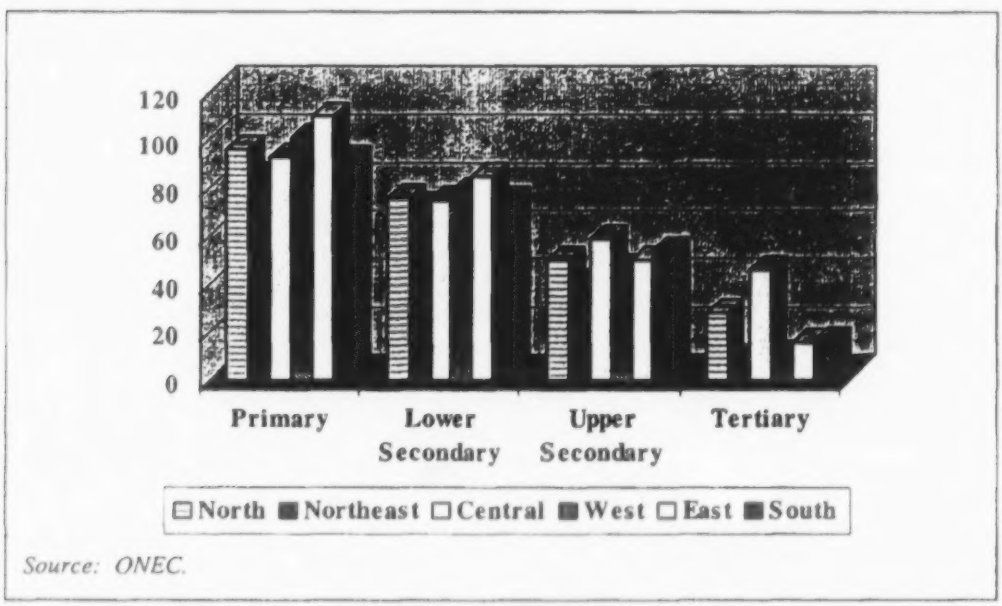
Raising pupil-teacher ratios is but one example (there may be many) of *ways by which the provision of education could be made more efficient*. Another might be the reduction of

---

[21] These estimates are based on an assumption that the budgets for all sectors other than education and for education sub-sectors other than secondary will grow proportionately to one another and at the same rate as GDP in the future.

administrative overhead costs, which appear to be high. The number of ministries or government departments with some role in the delivery or governance of education and training in Thailand is large, certainly more than ten significant players. Even within the Ministry of Education (MOE), the biggest player in the sector, there are a number of rather autonomous MOE departments, which may or may not be working harmoniously and in pursuit of the same goals for education. There would seem to be ample scope for increased cooperation, networking and sharing of resources – among government ministries, among ministry departments, among teaching institutions, and between government and the private sector. This could be expected to eliminate waste and overlap in the sector and thereby increase the efficiency with which education is provided. Improvements in efficiency such as those outlined above are nearly always desirable, but they are all the more urgent now given the budget stringency since the financial crisis and given the new demands on the system imposed by the education reform program.

Figure 5.4: Gross Enrollment Ratios by Region, 1997
(Percent)



Source: ONEC.

Not included among TDRI's simulations is any scenario to consider the impact of the Government's policy of *education decentralization* on secondary costs. The reason for this omission is that there are differences in opinion as to how decentralization will affect unit costs, both in the short-to-medium term, and in the long term. Some people are of the opinion that decentralization will ultimately *bring costs down*, by improving the efficiency of delivery. In the short run, however, there could be transitional costs, for such things as relocation and retraining of administrative staff, that could very well *make costs higher*.

A risk of decentralization, and one that will need to be managed and monitored, is that it could exacerbate differences in educational outcomes across regions and/or across income groups. Thailand has been quite successful in minimizing disparities across the six regions of the country (figure 6.4).[22] Enrollments, however, as well as government spending on education, are less equitably distributed across income groups, with children from poorer homes being less likely than children from richer homes to continue their education beyond the first few years. Decentralization could aggravate this situation unless measures are taken to ensure that the fiscal resources needed to provide quality basic education are available at the level where decentralized decisions will be taken. Decentralization of education management does not imply an abrogation of the central government's responsibility to raise revenues and allocate these equitably to regions and districts to achieve equality of educational opportunity for all children. It is also true in the short to medium term that the capacity to manage decentralized education will differ. Poorer districts of the country will need to be supported to build the capacity needed to deliver quality educational services.

The overriding objective of Thailand's education reform program is to achieve *universal enrollment* in secondary education. "Universal" does not mean "most"; it means "all." In nearly every country, the difficulty *and the cost* of enrolling a child in school goes up as the country gets closer to the target of universal enrollment - something that Thailand has virtually achieved already in primary education, and towards which it is making rapid progress now in secondary education. The last few children not enrolled in school are invariably the most difficult ones to attract – usually the very poor (for whom the opportunity cost of enrollment is high relative to family income), and often, but not always, those who live in remote areas of the country (where the cost of delivering educational services tends to be higher than in mainstream locations). The TDRI study considers a final scenario (Scenario 6) which includes the additional cost of a program to lure the hardest-to-reach children into secondary school and to keep them there through 12 years of education.

The estimated cost of the incentive program is notional only,[23] but the point to be made is that equality of educational opportunity in Thailand will require some targeting of resources to the most disadvantaged. This may be the biggest challenge of all, since the education clauses in the Constitution and the National Education Act are written to emphasize the importance of *equal inputs* per child, whereas what should really be equalized is the opportunity for each child to achieve the same output in terms of years of schooling completed and learning acquired.

---

[22] Only in tertiary education does there appear to be significant differences in participation, but it is difficult to measure regional enrollment ratios at this level, because many tertiary students may enroll in higher education institutions (HEIs) in regions other than where they grew up.

[23] It includes in-kind subsidies for lunch, school uniform and transportation plus a cash payment of Baht 100 per day, for 200 days per year, to offset the foregone earnings of an enrolled child who would otherwise be working.

BIBLIOGRAPHY[24]

*Abelmann, Charles, Albert G. Zuefack (World Bank), Lee Kian Chang, Pinchuda Tinakorn Na Ayuthaya (CSN and Associate). 2000. *Changing Workplaces, Changing Skills: Views from the Thai Private Sector on Work-Organization, Employee Retirement and Selection.* World Bank Research Paper. Washington, D. C.

Australia, Ministry of Education and Department of Education, Training and Youth Affairs. 2000. *National Framework for Technical Vocational Education in Thailand.* Selection of papers prepared by Peter Fleming, Project Advisor for the project Task Force.

Author Unknown. 2000. "Chance for Teacher to Get Degrees Commission Okays move to Help Them." *Bangkok Post.* Bangkok, Thailand.

Barro, Robert J. 1991. "Economic Growth in a Cross Section of Countries." *Quarterly Journal of Economics* 106(2):407-443.

Beach, King, John Schwille and Christopher Wheeler. 1992. "Transition to School, Transition to Work: A Review of Studies and Data on Primary Leavers and the Workplace in Thailand." Report for UNDP (United Nations Development Program) Project THA/91/X01. East Lansing, MI: Michigan State University, East Lansing, Mich.

Becker, Gary S. and Kevin M. Murphy. 1992. "The Division of Labor, Coordination of Costs, and Knowledge." *Quarterly Journal of Economics* 107(4): 1137-1160.

Becker, Gary S., Kevin M. Murphy and Robert Tamura. 1990. "Human Capital, Fertility and Economic Growth - Part 2: The Problem of Development: A Conference of the Institute for the Study of Free Enterprise System." *The Journal of Political Economy* 98(5):S12-S37.

Bennell, Paul. 1998. "Estimation of Labor Demand in Sub-Sectors." Background paper prepared for the Ninth National Economic and Social Development Plan, TDRI (Thailand Development Research Institute), April 1998. Bangkok, Thailand.

Blaug, Mark. 1987. "An Economic Analysis of Personal Earnings in Thailand." *The Economics of Education and the Education of an Economist* ed. Mark Blaug, 301-333. New York: New York University Press.

Chalongphob, Sussangkarn and Chalamwong Yongyuth. 1996. "Thailand: Development Strategies and Their Impacts on Labour Markets and Migration." *Development Strategy, Employment, and Migration* Paris: OECD.

*Hawley, Joshua D. 2000. *Changing Returns to Education in Times of Prosperity and Crisis.* World Bank Research Paper. Washington, D. C.

[24] Items marked by asterisks (*) are background papers produced for this study.

IMD (International Institute for Management Development). 1999. *The World Competitiveness Yearbook*.

*Johanson, Richard and Werawat Wanasiri. 2000. *Private Vocational Education in Thailand*. World Bank Research Paper. Washington, D. C.

*Kakwani, N. and Hyun Son. 1999. *Measuring the Impact of Education on Thailand's Labour Market*. World Bank Research Paper. Washington, D. C.

Mankiw, Gregory N., David Romer and David N. Weil. 1992. "A Contribution to the Empirics of Economic Growth." *Quarterly Journal of Economics* 107(2):407-437.

Middleton, John and Zafiris Tzannatos. 1998. "Skill for Competitiveness. Session 6. Removing Bottleneck to Productivity (II): Labor Markets and Skills Development." Background papers for the Conference on Thailand's Dynamic Economic Recovery and Competitiveness, joint publication of ONEC (Office of National Economic), Social Development Board and the World Bank, Bangkok, Thailand.

Middleton, John and Zafiris Tzannatos. 1999. *National Education Statistics; Academic Year 1996-1998*. ONEC (Office of the National Education Commission). Bangkok, Thailand: Chareon Phol Press.

Mincer, Jacob. 1974. "Schooling, Experience, and Earnings." *Human Behavior and Social Institution* Vol. 2.

Moock, Peter R. 1996. "Meeting Manpower Needs: Appropriate Roles for the Public and Private Sectors." Washington, D.C.: World Bank.

Murnane, Richard J. and Frank Levy. 1996. *Teaching the New Basic Skills Principles for Educating Children to Thrive in a Changing Economy*. New York, NY: The Free Press.

NESDB (National Economic and Social Development Board). 2000. *Thailand Development Indicators 1989-1999*. Government of Thailand.

ONEC (Office of National Education Commission). 1994. *Economic Rate of Returns from Investment in Education*. Large Format, Bangkok, Thailand.

ONEC (Office of National Education Commission). 1999a. *National Education Statistics: Academic Year 1996-1998 and Thailand Education Statistics Report*. Bangkok, Thailand.

---------. 1999b. *Thailand's Economic Crisis: Thai People Tell Their Stories*. World Bank. Bangkok, Thailand.

---------. 1999c. *Thailand's Education Statistics Report of 1999*. Bangkok, Thailand: Prik-Wan Graphic Press.

---------. 1999d. "Thailand's National Education Act of 1999." *Government Gazette* 116(74) Kor.

---------. 1999e. "The World Competitiveness Yearbook 1999." *Thailand Social Monitor* IMD (International Institute for Management Development). World Bank. Bangkok, Thailand.

ONEC (Office of National Education Commission). 2000a. *Policy Study*. Office of the National Education Commission. Bangkok, Thailand.

---------. 2000b. *Thailand's Development Indicators 1990-1999*. Document Prepared for the National Workshop on the Framework of the Ninth National Economic and Social Development Plan. The National Economic and Social Development Board.

---------. 2000c. *Thailand's Educational Capacity in the World in 1999*. Office of the National Education Commission. National Statistic Center for Education Reform. Prik-Wan Graphic Press, Bangkok.

---------. 2000d. *Thailand's Labor Force Survey*. Social Statistics Division, National Statistics Office. Bangkok, Thailand.

Orapin, Sopchokchai. 1991. *Three More Years in School: Parents' Opinions and Problems*. 1991 Year End Conference on Educational Options for the Future of Thailand. The Thailand Development Research Institute.

Pichai, Charnsupharindr. "The Rate of Return to Investment in Thai Education." *The Philippine Economic Journal* 18(3).

TDRI (Thailand Development Research Institute). 1998. *Estimation of Labor Demand in Sub-Sectors*. Document for the National Master Plan Working Seminar at the Emerald Hotel. Bangkok, Thailand.

*----------. 2000. *Financing Education Reform in Thailand*. Bangkok. Draft research paper.

UNDP (United Nation Development Programme). 1999. Human Development Indicators.

Vuthiphong, Priebjrivat. 1984. "Wage Determination of the Public Sector in Thailand." Doctoral Dissertation, University of Chicago, Chicago, Ill.

World Bank. 1998. *Thailand: Education Achievement, Issues and Policies*. Report No. 18417-TH. Washington, D.C.: World Bank.

Zeufack, Albert G. 1999. "Employer-Provided Training Under Oligopolistic Labor Market: Evidence from Thai Manufacturing Firms." Mimeo, DECRG, The World Bank, Washington, D. C.

The World Bank
1818 H. Street, N.W.
Washington, D.C. 20433, U.S.A.

Telephone: 202 477 1234
Facsimile: 202 477 8391
Internet: www.worldbank.org
E-mail: feedback@worldbank.org